Ministry of Foreign Affairs – Department for Green Diplomacy and Climate

Meeting in the Council for Development Policy on 27.01.2022

Agenda Item No. 3

1. Overall purpose:	For discussion and recommendation for the Minister
2. Title:	Danish Energy Partnership Programme III (DEPP3) – Enhanced Engagements in South Africa and Vietnam
3. Presentation for Programme Committee:	04.10.2021
4. Previous Danish support to DEPP 3 presented to UPR	UPR meeting 10.09.2020 recommended contribution of 250 million DKK to Danish Energy Partnership Programme III.

DEPP III- Enhanced engagements in South Africa and Vietnam

Key results:
In **South Africa** the national Wind Atlas has been completed and is applied by Department of Mineral Resources and Energy in the work of improving policy and planning for integrating wind energy in the national energy system. The Wind Atlas will map the potential wind resource in regions geographically covering 25 percent of the country. The project will support South Africa's nationally determined contributions to the Parish Agreement updated prior to COP 26.
In **Vietnam**, completion of up to 100 energy audits per year for energy intensive industries will inform the work of Ministry of Industry and Trade on strengthening the regulatory framework for energy efficiency and improve industries compliance with the legal framework.
A new centre of excellence for energy efficiency will serve as hub for sharing data, findings and recommendations from the energy audits, disseminating energy efficiency technologies and best practices for selected industries and information on available financing mechanisms. The project supports the Vietnam announcement at COP 26 of carbon emission neutrality by 2050.

Justification for support:
- The project contributes to the Danish Strategy for Development Cooperation and addresses development challenges in growth economies, where the existing and projected increases in energy demand and greenhouse gas (GHG) emissions are highest, thereby ensuring that the Danish contribution will have the highest possible effect on global warming.
- The project is responding to requests from key partners and strengthens the results of DEPP 3.
- The project responds to new opportunities for allowing DEPP III to contribute to reduction in GHG emissions by strengthening the demonstration effect of thorough energy interventions and linking the main work of DEPP III (planning and regulative framework) to actual financing of investments in wind farms in South Africa and energy efficiency solutions in industries in Vietnam.

File No.	2020-17097					
Country	South Africa and Vietnam					
Responsible Unit	Green Diplomacy and Climate					
Sector	23110 – Energy policy and Administrative Management					
Partner	Danish Ministry of Climate, Energy and Utilities/Danish Energy Agency					
DKK million	**2022**	**2023**	**2024**	**2025**	**20xx**	**Total**
Commitment	46,40					
Projected	10,35	15,35	10,35	10,35		46,40
Duration	2022-2025					
Previous grants	Danish Energy Partnership Programme (DEPP III). DKK 250 Million					
Finance Act code	06.34.01.70 Climate Envelope					
Head of unit	Karin Poulsen					
Desk officer	Lone Bøge Jensen					
Reviewed by CFO	Rasmus Tvorup Ewald					

Relevant SDGs

Major risks and challenges:

- COVID-19 restrictions in South Africa and Vietnam have affected and still affect the overall implementation of DEPP III in the two countries. The risk of delays is mediated by flexibility in project management and delegation of authority in order to adapt specific activities to changes in the COVID situation.
- The risk of local authorities or companies being reluctant to introducing green solutions in energy production or energy efficiency measures in industries is mediated by the cost efficiency demonstrated by the project - and in the case of Vietnam also by policies and regulations.

Strategic objective

The partnership countries achieve low carbon development, implement the Paris Agreement on Climate Change and continue upscaling and realizing their NDC goals.

Justification for choice of partner:

Department of Mineral Resources and Energy in South Africa and Ministry of Industry and Trade in Vietnam are the natural partners for the engagement of the project, as these entities have the national mandate to address the planned activities vis-a-vis the provinces.

Summary:

In South Africa the project will consolidate the fourth and final phase of the national Wind Atlas (WASA 4) and provide a key input to the work of the Just Transition Partnership coordination of the COP 26 donor pledge for financing projects for phasing out of coal in South Africa. The project will provide reliable, accurate and representative data on availability of wind resources, which is critical for planning of large-scale exploitation of wind power and for gaining the trust from potential investors. One of the provinces benefitting from the WASA4 is Mpumalanga province. The province accounts for 83% of South Africa's coal production and has an aging thermal power fleet. To avoid further investments in renovating outdated coal plants - or in the construction of new ones – The Department of Mineral Resources and Minerals needs the Wind Atlas information to plan for an alternative green development.

In Vietnam the project will allow the Ministry of Industry and Trade to stimulate energy efficiency measures and investments in energy intensive industries by introducing energy audits in selected provinces. Energy audits provide site-specific guidance to factories, which enable the state-owned and private enterprises to identify cost efficient measures to reduce energy consumption and CO2 emissions in a short to medium time perspective. Efforts will be made to review innovative and emerging technologies and provide technical advice in support of pilots applying selected technologies in industrial facilities.

Together with Ministry of Industry and Trade, the Danish Energy Agency will develop a centre of excellence for energy efficiency that will serve as hub for all collected data, findings and recommendations from the energy audits.

Budget (engagement as defined in FMI**):**

South Africa Wind Atlas (WASA)	15 DKK million
Vietnam – Energy Efficiency Audits	26.4 DKK million
Un-allocated funds	5 DKK million
Total	**46.4 DKK million**

Abbreviations

CO_2	Carbon dioxide
COVID-19	Coronavirus Decease 2019
COP	Conference of the Parties (to the UNFCCC)
DE	Development Engagement
DEA	Danish Energy Agency
DEPP	Danish Energy Partnership Programme (China, Mexico, South Africa, and Vietnam)
DoE	Department of Energy (South Africa)
DKK	Danish Kroner
DMRE	Department of Mineral Resources and Energy (South Africa)
DTU	Technical University of Denmark
EE	Energy Efficiency
EESD	Energy Efficiency and Sustainable Development Department (part of MOIT, Vietnam)
ERAV	Electricity Regulatory Authority of Viet Nam (part of MOIT, Vietnam)
Eskom	Electricity Supply Commission
GDP	Gross domestic product
GHG	Greenhouse Gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
IEA	International Energy Agency
IPP-Office	Independent Power Producer Office (South Africa)
IRP	Integrated Resource Plan (South Africa)
LTA	Long-Term Advisor
MCEU	Danish Ministry of Climate, Energy and Utilities
MFA	Ministry of Foreign Affairs of Denmark
MOIT	Ministry of Industry and Trade (Vietnam)
MTR	Mid-Term Review
NDC	Nationally Determined Contribution under the Paris Agreement on Climate Change
RE	Renewable energy
SDG	Sustainable Development Goal
SEC	Strategic Engagement and Cooperation
SSC	Strategic Sector Cooperation
ToC	Theory of Change
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollars
VRE	Variable Renewable Energy

Content

Programme document for enhanced engagement under DEPP III

1. Introduction

The present project document outlines the background, rationale and justification, objectives and management arrangement for development cooperation concerning an enhanced engagement under the existing Danish Energy Partnership programme III 2021-2025 (DEPP III) as agreed between the Ministry of Climate, Energy and Utilities of Denmark (MCEU) and the Ministry of Foreign Affairs. DEPP III was approved in October 2020 with a total budget of 250 million DKK covering a five-year program in China, Mexico, South Africa and Vietnam. The enhanced engagement contributes to the strategic objective of DEPP III, which is: *"The partnership countries achieve low carbon development, implement the Paris Agreement on Climate Change and continue upscaling and realising their NDC goals"*. The project enhances outcomes of DEPP III in South Africa and Vietnam.

COP26 in Glasgow reached a final agreement, which keeps the world within reach of the 1.5 degrees target and stipulates a phase down of coal - and a phase out of fossil fuel subsidies. COP26 also emphasised a critical need for countries to accelerate the green transition and to deliver more ambitious mitigation targets required to reach the Parish Agreement. Prior to and during COP 26, Vietnam and South Africa expressed new and more ambitious mitigation targets and Vietnam declared carbon emission neutrality by 2050.

The Danish Climate Act is a direct response to the global climate crises. Denmark's new strategy for development cooperation "The World We Share" has a dedicated focus on climate change. It describes how enhanced efforts on climate change mitigation will be delivered by "*strengthen the Danish SDG7 leadership and energy cooperation on green transition in developing countries, including promoting renewable energy and energy efficiency. This applies particularly to growth economies with high emission levels"*. During COP26 Denmark pledged DKK 100 million in support of global phasing out of coal. The Danish government has in the financial act 2022 walked the talk by increasing the Development Cooperation budget for the Climate Envelope. The DEPP III government-to-government cooperation in the energy sector lies at the heart of the efforts to promote green energy transition and underpins Danish climate diplomacy.

Like the DEPP III, the enhancement of DEPP III builds on trust-based government-to-government relationships in the partner countries, applying a long term capacity building approach for reforming policies and regulative frameworks that guides the development in the energy sector. The partnerships under the DEPP III were established in 2012. Since then, the design of the technical cooperation – inspired by the concept of Doing-Development-Differently (DDD) - has been transformed into a holistic endeavor in mutual support of multilateral cooperation, Danish climate diplomatic efforts and the work of the Danish Trade council in partner countries. In order to be able to respond to opportunities and challenges in a complex and changing reality, the DEPPIII design applies the adaptive management approach that ensures frequent interactions in the project management structure and flexibility in allocation of resources.

The project document was presented to the Programme Committee 4. October 2021. The appraisal was conducted by the Ministry of Foreign Affairs, Department of Evaluation, Learning and Quality in November 2021.

2. Brief description of the new elements of DEPP III

The DEPP III programme has a common country objective for all partner countries, which is: "*The country develops low carbon pathways related to energy in support of their National Determined Contribution and the country up-scale NDC mitigation targets and related measures by 2025"*

During the first year of DEPP III implementation - and in spite of COVID-19 - the cooperation and dialogue have been prioritised by all partners. In Vietnam, the planning of DEPP III interventions has resulted in an agreement of introducing energy audits as an instrument for creating an incentive scheme for industries to comply with the Law on Energy efficiency and Conservation. In South Africa the main dialogue has been on how to optimize the use of the Wind Atlas for South Africa (WASA).

South Africa

The outcomes of DEPP III in South Africa are to improve: 1) Energy sector planning and policy development by integration of renewable energy, ensuring just transition and cost-effective measures; 2) Regulatory framework, institutional development, grid and energy system planning supporting the market for variable renewable energy solutions; and 3) Regulatory framework, operational procedures and flexible options in the power system supporting cost-effective security of supply and a rising share of renewable energy in the national energy mix.

Despite COVID 19 restrictions and the limited travelling options during the first year of implementation, DEPP III had an efficient implementation of planned activities with partners in South Africa's state-owned power utility, ESKOM and with the Independent Power Producers office (IPP), which is an independent government organization with reference to DMRE, National Treasury and the Development Bank of Southern Africa. The mandate of the IPP is to secure electrical energy from the private sector for renewable and non-renewable energy sources. DEA has conducted well-attended workshops in support of the work streams on transmission and distribution, grid code development and digitalization of the South African Independent Power Producer programme. The close cooperation between the partners was underpinned during a high-level visit by the DEA Director General in October 2021.

The Programme Support Agreement between South Africa and Denmark enabling the official implementation of DEPP III has been delayed, but is expected to be signed by January 2022. The posting of a long term advisor to the office for Organizational Strategy in ESKOM is awaiting the signing of the agreement.

In South Africa the enlargement of DEPP 3 will consolidate the fourth and final phase of the national Wind Atlas (WASA 4). DEPP III is thereby responding to a request from DMRE, who will become the main partner of the project. The project will provide reliable, accurate and representative data on

availability of wind resources, which is critical for planning of large-scale exploitation of wind power and for gaining the trust from potential investors. The project substitutes activities related to energy modelling with DMRE originally planned for under DEPP III. However, the WASA 4 project improves the prospect of reaching the DEPP III's outcome 1 for South Africa, which is to strengthen: "*Energy sector planning and policy development, integrating renewable energy through a just transition with cost-effective measures of meeting policy objectives".* In addition, the WASA 4 will provide key data inputs to the cooperation between ESKOM, DMRE and DEA in terms of grid and energy system planning.

South Africa's financial infrastructure for wind power production is well established and functioning on commercial basis, as is demonstrated in the provinces of the Northern and Western Cape. In provinces not covered by the existing WASA - investments in wind energy are non-existing apart from a few test facilities, as suitable sites and projects cannot be identified without the data and analysis WASA provides. The province of Mpumalanga is situated in the region to be covered by WASA 4. The province accounts for 83% of South Africa's coal production and has an aging thermal power fleet producing energy by fossil fuels to a kilowatt-hour price twice the price of renewable energy. To avoid further investments in renovating outdated coal plants - or the construction of new ones - DMRE needs the WASA information to plan for an alternative development.

Plans for upscaling wind energy are often met with opposition from vested interests in coal, oil and gas. In Mpumalanga this opposition will be backed by the many families depending on income from the coal production. Therefore, in cooperation with the World Resource Institute (WRI), DEPP III will provide assistance for socio-economic projections and recommendations for effective policy measures that can reduce socio-economic consequences of a low carbon pathway for the Mpumalanga province. Based on data and findings generated by DEPP III, WRI will provide technical assistance and analysis on subnational level to just transitions in the energy sector. The joint effort by WRI and DEA in the Mpumalanga province will guide the Government's efforts to develop a common national framework on just transition.

The main elements of the project is capacity development and training - and installation of measurement masts. DMRE will co-finance approximately 10% of the total costs for WASA 4. The activities will be implemented in a technical day-to-day work between professional staff in DMRE, a team of experts in wind measurement and analysis from the Danish Technical University and from Council for Scientific and Industrial Research (CSIR) in South Africa, DEA and the sector advisor at the Danish embassy. The World Resource Institute (WRI) will assist DEA in assessing the findings of WASA 4 and combine the findings with a socio-economic analysis of Mpumalanga province resulting in specific recommendations for policy interventions in support of job creation opportunities in a just transition scenario.

Vietnam

DEPP III in Vietnam has three outcomes: 1) Enhanced capacity in energy sector planning and policy development by integration of renewable energy and cost-effective measures of meeting the Vietnamese NDCs, while ensuring national security of supply; 2) The regulatory framework includes flexible energy options in the power system supporting energy efficiency, security of supply and increases share of renewable energy in the national energy mix; and 3) Incentive schemes for energy

efficiency in the industrial sector, including improved capacity to develop and revise the energy efficiency regulatory framework at national level and enforce compliance with the legal framework for energy efficiency at provincial level.

Since the launch of DEPP III in November 2020, the programme has started implementation of all three outcomes. With technical support from DEA the Vietnamese Electricity and Renewable Energy Authorities (EREA) were able to produce and present at the COP 26 the 2021 Vietnamese Energy Outlook (VEO). The data and analysis of the report are contributing to the national energy planning process (outcome 1). DEA has together with EREA started the work of analysing the regulatory barriers for integrating renewable energy in the national grid and upgrading and reorganizing the existing grid codes (outcome 2). As part of the plans for introducing an energy efficiency incentive scheme (outcome 3), Ministry of Industry and Trade (MOIT) with the assistance from DEA, has started the work of adjusting the legal basis and reviewing procedures to improve reporting on e.g. energy consumption of the most energy intensive industries. Workshops at regional and national level have supported the introduction of new guidelines and procedures.

The DEPP III Government-to-Government Agreement between Vietnam and Denmark was signed in October 2021. The programme has posted two long-term advisors at MOIT.

The Vietnamese Prime Minister at the COP26 announced that Vietnam will be carbon neutral in 2050 and signed the COP26 agreement on reducing coal-fueled power generation. The Vietnamese NDC has an unconditional mitigation target of 9% and a conditional mitigation target of 27% in 2030. The Government of Vietnam is engaged in ambitious plans for Energy Efficiency through the National Energy Efficiency Programme 3 (VNEEP 3). The target is to reduce the national energy consumption by 5-7% by 2025 and 8-10% by 2030.

The project will allow MOIT to stimulate energy efficiency measures and investments in energy intensive industries by introducing energy audits in selected provinces. Energy audits provide site-specific guidance to factories, which enable the state-owned and private enterprises to identify cost efficient measures to reduce energy consumption and CO2 emissions in a short to medium time perspective. The DEA will provide capacity building in GHG inventory development and GHG Measurement, Reporting and Verification systems. Efforts will be made to review innovative and emerging technologies and provide technical advice in support of pilots applying selected technologies in industrial facilities. If relevant, the energy audits will include assessment of aspects related to just transition, if the work force at the involved enterprises will need up-grading of skills in order to operate new and more energy efficient technologies.

Together with MOIT, DEA will develop a centre of excellence for energy efficiency that will serve as hub for all collected data, findings and recommendations from the energy audits. The centre will be placed under MOIT and supported by the Danish long term advisor in Vietnam, together with energy efficiency experts in MOIT. The centre will include an online platform where all non-confidential information on enterprise solutions, savings, best practises, guidelines and tools will be made public available.

The project will add two new outputs to the outcome 3 of DEPP III in support of introducing an incentive scheme for energy efficiency in industries. The new output 4 is: *Completion of up to 100 energy audits per year for energy intensive industries*. The new output 5 is: *Establishment of a centre of excellence at MOIT for energy efficiency in industries*. The experience and information gathered from the enterprises engaged in energy auditing will inform activities related to improving the regulatory framework for energy efficiency and the energy efficiency technology catalogues, which are other outputs of outcome 3 of DEPP III.

The partnership is constructed around a steering committee, which governs DEPP III in Vietnam. The members of the Steering Committee are MOIT, the Danish embassy in Hanoi and DEA. Day-to-day technical work is carried out by professional staff in MOIT, energy efficiency experts in the Danish Energy Agency, DEPP III energy efficiency long term advisor at MOIT, international and local consultants, incl. energy auditors, enterprises and the ministry's staff at provincial level.

3. Context, strategic considerations, rationale and justification

The project contributes to the Danish Strategy for Development Cooperation, which translates key goals of the Danish Government's Climate Act and the Global Climate Strategy into a strategic framework for how Denmark will contribute to reduction of global GHG emissions and a green transition in developing countries. Denmark will promote ambitious national climate action plans that enable developing countries and growth economies to move from fossil fuels to clean energy sources, particularly through coal phase-out in parallel with sustainable and socially just economic development. The project advances the Danish ambition of ensuring access for all to modern, sustainable and affordable energy (SDG 7), including increased level of renewable energy in the global energy mix, doubling the global rate of improving energy efficiency and strengthening international cooperation in order to facilitate more investments in energy infrastructure and green technologies. The government-to government cooperation is an important instrument for reaching the Danish global goals.

The DEPP III and the project are targeted at growth economies, where the existing and projected increases in energy demand and GHG are highest, thereby ensuring that the Danish contribution will have the highest possible effect on global warming. The enlargement of DEPP III in South Africa and Vietnam will allow DEPP III to strengthen the demonstration effect of thorough energy interventions in targeted provinces, thereby linking the main work of DEPP III (planning and regulative framework) to actual project investments in wind farms in South Africa and energy efficiency solutions in industries Vietnam.

The enlargement of DEPP III supports the MCEU and DEA's internal strategy for international collaboration, prioritising deeper partnerships with trusted partners as a strategic driver for impact. The energy sectors in South Africa and Vietnam are considered as critical infrastructure with high political awareness, hence long-term and trust based relationships are key preconditions for promoting green energy solutions.

The project addresses a significant development challenge for the global green energy transition in the energy sector. The COP 26 called for urgent action to reduce GHG emissions in all countries – and in particular in the countries with the largest emissions. Vietnam and South Africa are

both growth economies with existing and projected large CO2 emissions. The energy sector is the dominant GHG emitter in the two countries. International collaboration and support to decarbonizing the energy sectors is therefore of vital importance in order to ensure low carbon and sustainable development in the countries. The strategic focus on decarbonizing the energy sector is supported by the United Nations Environment Programme GAP report from 2019, which identifies renewable energy electricity expansion as one of the key sectors with greatest GHG reduction potential. The potential for reducing GHG emissions is supported by the report from the International Energy Agency (IEA) "Projected Costs of Generating Electricity", which estimates that global prices for solar and wind energy are competitive to fossil fuels for new installations, if the right framework conditions and market structures are in place. Yet, renewable energy accounts for only 0.8 % of the total energy mix in South Africa and for 9.8 % in Vietnam. Coal based power plants are still the preferred choice in in both countries. This underpins the strategic argument for supporting the enabling environment for renewable energy in order to increase partner's awareness and capacities for exploiting the untapped potentials of renewable energy.

The project is embedded in the coordinated donor cooperation. Through agreements and partnerships with international and multilateral organizations, the DEPP III is collaborating with key multilateral development partners to make a collective push towards low carbon development in Vietnam and South Africa. The Danish MFA, MCEU and DEA have promoted a new and more coherent approach to the Danish support to IRENA's Long-Term Scenarios for the Energy Transition Programme with the aim of creating direct links between the multilateral engagement and bilateral Danish support in selected countries. A working group ensures coordination and new country specific initiatives. Denmark has posted a long-term liaison advisor at IRENA, which together with the working group provides direct and open access of information between IRENA and DEA. DEA will engage in dialogue with IRENA to explore areas for collaboration in Vietnam and South Africa.

A similar coherent approach has been applied to the Danish contribution to the World Resource Institute's New Climate Economy Programme, which supports socio-economic studies and recommendations on just transition as part of low carbon development. The World Resource Institute (WRI) and DEA have established a partnership conducting joint activities utilizing DEPP III's findings in South Africa and Vietnam. In the case of Vietnam, DEA and WRI have agreed to join efforts in producing policy papers illustrating the likely socio-economic impacts of the scenarios presented in the Energy Outlook Report. Thematic areas of the socio-economic assessment may include job creation, societal costs of pollution and macro-economic growth.

Similarly, close dialogue and coordination are conducted with the World Bank's Energy Sector Management Assistance Programme (ESMAP) and the Global Green Growth Institute (GGGI) to explore synergies and collaboration. The coordination is performed by dedicated contacts persons in MFA, DEA, World Bank and the Global Green Growth Institute. In South Africa and Vietnam, the Danish embassies and DEPP III's long term advisors are engaged in country specific coordination with the same multilateral organisations.

South Africa: During COP26 the South African government together with USA, UK, France, Germany and the EU made a combined pledge of USD 8.5 billion in support of just transition in the South African electricity sector, primarily targeted at improving ESKOM's possibilities of financing energy efficiency measures, retirements of coal power plants and development of renewables. Within the framework of the established cooperation, DEA and the long term advisor to be placed in ESKOM will be well positioned to advise ESKOM in this work within the overall framework of DEPP 3. In 2020 a presidential climate commission with participants from the private sector, labour organisations and civil society was established to advice the president and treasury on a just and green transition. The commission is foreseen to play a key role advising the government on the programming of the donor pledge. DEPP 3 may on an ad hoc basis be able to support targeted analytical work of the commission using unallocated funds from the DEPP III budget.

The DEA, together with the Sector Advisor at the embassy in Pretoria will be active in the South Africa Working Group of donors supporting the energy sector. Part of this work will be to coordinate with the EU delegation on policy interventions in the sector and identifying mutually supportive interventions with GIZ (South African-German Energy Programme) and World Bank (Energy Sector Management Assistance Programme - ESMAP). During the first six months of implementation, identified venues for concrete cooperation with other donors engaged in the national energy planning and in Mpumalanga province will be identified and presented to the steering committee of DEPP 3.

Vietnam: MOIT has established the Vietnam Energy Partnership Group (VEPG) as a platform to foster cooperation between donors supporting the energy conservation area, which includes a working group on energy efficiency. Denmark is currently co-chairing the working group focused on energy data and statistics as part of the VEPG. The main donors are World Bank with the Vietnam Energy Financing for Industrial Enterprises Programme, GIZ with the Renewable energy and Energy Efficiency Programme, and USAID with the Vietnam Low Emission Energy Programme.

The project brings the overall DEPP III engagement closer to concrete investments in GHG reductions by linking to financial institutions. The DEA is collaborating closely with Denmark's export credit agency (EKF), the Investment Fund for Developing Countries (IFU) and the Danida Sustainable Infrastructure Finance (DSIF) managed by IFU. The objective is to develop a coherent approach for bridging between technical assistance provided by the DEPP III and Danish financial institutions possibilities of financing projects in partner countries. The collaboration is formalized based on agreements and country-specific action plans between DEA, EKF and IFU. DEA has regular contact with country focal points from EKF, IFU and DSIF in order to facilitate that the experience of the financial institutions can inform e.g. the regulative work of DEA and to identify investment opportunities for EKF and IFU.

In Vietnam, the main donor for investments in energy efficiency is the World Bank´s programme; Vietnam Energy Efficiency for Industrial Enterprises. The partner in MOIT is planning to link the pilots of energy audits for the energy intensive industries to the project pipeline of the World Bank investment lending mechanism and the embassy will liaise with the World Bank in order to support these plans. The World Bank lending mechanism is expected to be financed for a second phase matching the DEPP III implementation period. The Centre of Excellence for energy efficiency to be

established as part of the project will play a key role in introducing concrete venues for financing to the participating enterprises, both via the World Bank mechanism, but also to private sectors solutions that may be supported by IFU, EKF or others.

In South Africa the large financial pledge made by donors during COP26 for a just energy transition in South Africa improves the prospects for the DEPP III to contribute to an actual reduction of GHG emission in the short to medium term perspective. The existing cooperation with the DMRE on energy planning and policy and the work going on with ESKOM on the regulatory framework and grid and energy system planning will contribute to creating the foundation for introducing large scale investments in the green transition of the energy sector. The WASA 4 mapping of wind resources will be a requisite for developing the market for wind energy in the province of Mpumalanga, which is a target province of the just transition initiative.

The Just Transition Partnership (JTP) working group has recently been established. It is the expectation that the Danish embassy, supported by DEA, will be invited to participate in this key forum for donor financial support. Other important members of the Just Transition Partnership could be the Climate Investment Fund's (CIF) "Accelerating Coal Transition Investment Programme" (ACT) and the African Development Bank's (AFDB) "Sustainable Energy Fund for Africa programme (SEFA)". The ACT programme is supporting both public and private sector entities and can e.g. provide technical assistance and funding for concrete projects. SEFA supports the preparation of concrete bankable projects and promotes 'first movers' of companies engaging in the green energy transition, including de-carbonation projects.

The project benefits environmental concerns and promotes issues related to Human Rights, Gender and Indigenous peoples. In addition to climate change mitigation, the DEPP III and the project contribute to sustainable development efforts in South Africa and Vietnam through the co-benefits of a cost-efficient green energy production with increased energy security. The benefits relate to health and environment, as renewable energy production reduces the level of air pollution, which in particular will benefit the poor part of the population that cannot afford to protect them-self from exposure to pollution nor afford proper health care.

The programme has a dedicated focus on just transition in the partner countries with the overall vision that "nobody is left behind". Efforts on just transition and green job creation have an embedded dimension of gender equality, as a transition from black to green energy will yield more employment opportunities and higher quality jobs for women. IRENA estimates that women have a higher share of the total employment in energy systems based on renewable energy (32% of the workforce) compared to the oil and gas industry (22% of the workforce) [1] and that 28% of the women working with renewable energy production are employed in areas of science, technology, engineering and mathematics.

In South Africa the role of the Presidential Climate Commission is to deliver research and information on just transition and to build consensus among the many parties and interests in society. The DEPP

[1] IRENA 2019. A Gender Perspective.
https://irena.org/-/media/Files/IRENA/Agency/Publication/2019/Jan/IRENA_Gender_perspective_2019.pdf

III will evaluate the possibilities of contributing to the socio-economic analysis planned by the Commission by using the unallocated funds in the DEPP III. These activities could be targeted research on the green transitions implications for vulnerable communities and social groups - or consultation activities.

4. Theory of Change for additional support to DEPP III in South Africa and Vietnam

The theory of change is that *if* DEPP III, based on concrete demands from existing long-term partners, provides additional support to strategically chosen areas of engagement in South Africa and Vietnam, *then* partner institutions will be more effective in their efforts to meet country specific targets related to green energy transition and climate change mitigation. More concretely, partners will have enhanced capacities to develop evidence-based policies or strategies supporting wind energy in South Africa and enhance regulatory compliance of energy efficiency in Vietnam, resulting in energy intensive enterprises investing in energy efficiency.

By improving the policy oriented and regulatory playing field for renewable energy and energy efficiency, partner institutions will contribute positively to the overall strategic objective of DEPP III which is defined as*: The partnership countries achieve low carbon development, implement the Paris Agreement on Climate Change and continue upscaling and realizing their NDC goals.*

The theory of change for DEA engagement in the two countries is outlined in causalities below.

South Africa

If DEPP III contributes to wind mapping for the fourth and final stage of WASA and engages with international partners in providing recommendations for a just transition in Mpumalanga, ***then***

DMRE, ESKOM and provincial authorities in Mpumalanga are empowered to strengthen the policy framework for just transition and an enabling environment for the wind energy market, and ***then***

The central and provincial governments can attract development financial institutions, investors and other stakeholders to engage in wind energy production with clear perspectives for just transition, green job generation and green regional socio-economic development, and ***then***

Wind energy can be a feasible substitute to coal in South Africa and enable the government to achieve low carbon development, implementing the Paris Agreement on Climate Change and continue to upscale and realizing the NDC goals.

Vietnam

If DEPPP III identifies cost efficient options for energy efficiency at energy intensive industries in Vietnam, and contributes to capacity development of energy auditors, energy managers and other stakeholders**, and**

If the energy audits and capacity development are anchored at the centre of excellence for energy efficiency at MOIT **and**

If the project can link the energy audit reports and identified energy efficiency projects to the pipeline of financial development partners and commercial financial institutions, ***then***

The energy intensive enterprise in selected provinces will be empowered to undertake investment in energy efficiency options and technologies, and **then**

The centre of excellence will be able to inspire other provinces and enterprises to engage in energy efficient investments, and **then**

Energy efficiency will reduce the overall energy use and demand, which will lead to GHG reductions and enable Vietnam to achieve low carbon development, implement the Paris Agreement on Climate Change and continue to upscale and realize the NDC goals and increase the likelihood of becoming carbon neutral by 2050.

5. Result frameworks for the enhanced support

Outcomes and outputs for the enhanced engagement of DEPP III are presented below. The complete result framework for DEPP III, incl. the additional support is available in Annex I.

South Africa

The WASA project falls within the existing outcome 1 in DEPP III South Africa and output 1 has been amended to capture the new WASA engagement.

Outcome 1	Energy sector planning and policy development, integrating renewable energy through a just transition with cost-effective measures of meeting policy objectives
Output 1	Completion of the national Wind Atlas for South Africa and strengthened capacity to conduct power system studies and wind resource assessment (WASA4)

Vietnam

The outcome for energy efficiency in Vietnam is unchanged compared with the original outcome under DEPP III. However, two additional outputs have been developed as part of the support to energy efficiency measures.

Outcome 3*	Incentive schemes for energy efficiency in the industrial sector and improved capacity in place to develop and revise the energy efficiency regulatory framework at national level and enforce compliance with energy efficiency legal framework at provincial level
Output 4*	Energy audits for energy intensive industries identifying cost efficient options for energy efficiency measures combined with capacity development of energy auditors and other stakeholders.

Output 5*	Centre of Excellence at MOIT for energy efficiency in the industrial sector anchoring the energy audits and linking to financing options as well as other development partners.

*****Outcome and outputs are numbered as they build upon the existing framework of DEPP III in Vietnam. With this approach, the numbering of outputs is consistent with the updated result framework for DEPP III in Vietnam.

6. Brief analyses of the partners

South Africa – Department of Mineral Resources and Energy

DMRE was established in 2019 by the merger of the Department of Energy and the Department of Mineral Resources. DMRE is responsible for ensuring exploration, development, processing, utilisation and management of South Africa's energy sources. Its role is to formulate energy policies, regulatory frameworks and legislation, and oversee implementation to ensure energy security; promotion of environmentally friendly energy and access to affordable and reliable energy in South Africa.

DMRE has a coordinating role for the Independent Power Producers Office office (IPP) and are relying on them to implement the procurement of renewable energy in support of the Integrated Resource Plan 2019 (IRP). The Nationally Determined Contribution (NDC) is he remit of the Department of Environment, Forestry and Fisheries, but the DMRE will ensure its fulfilment, partly through the IRP2019, who's purpose it is to lay out the plan on how to reach the NDC. The additional support to DMRE and the partnership regarding WASA 4 is anchored within DMRE Chief Directorate of Renewable Energy Projects. The Chief Directorate of Renewable Energy Projects has successfully been in charge of the previous phases of WASA.

Vietnam Ministry of Industry and Trade

MOIT is the key ministry of the government of Vietnam on state management of industry and trade including electricity, new energy, renewable energy, oil and gas. MOIT has, among other things, the overall responsibility to ensure secure power supply to Vietnam. For energy efficiency activities, the most relevant agency under MOIT is the Energy Efficiency and Sustainable Development Department (EESD).

EESD is responsible of the Vietnam National Energy Efficiency Programme 3 (VNEEP3), including national energy efficiency targets. ESSD has the overall national responsibility for regulations of energy efficiency policy in the energy sector. New regulations are piloted at provincial level before new initiatives can be rolled out nation-wide.

7. Overall budget at output-level

The budget for additional funding to DEPP III in South Africa and Vietnam is presented in table 1 below. The budget covers DEA activities only and no funds will be transferred to partner institutions. The DEA sub-contracting of consultants follows EU regulation on public tenders.

South Africa

Outcome 1: Energy sector planning and policy development, integrating renewable energy through a just transition with cost-effective measures of meeting policy objectives

In million DKK	2022	2023	2024	2025	Total
Output 1. Application of power system studies and sustainable renewable energy assessment (WASA).	3.75	3.75	3.75	3.75	15.00
Total	3.75	3.75	3.75	3.75	15.00

In addition to the 15 mil. DKK, DMRE will co-finance approximately 10% of the WASA 4 project cost.

Vietnam

Outcome 3*: Incentive schemes for energy efficiency in the industrial sector and improved capacity in

place to develop and revise the energy efficiency regulatory framework at national level and enforce compliance with energy efficiency legal framework at provincial level

In million DKK	2022	2023	2024	2025	Total
Output 4* Up to 100 energy audits per year for energy intensive industries completed	5.94	5.94	5.94	5.94	23.76
Output 5*. Centre of excellence at MOIT for energy efficiency in the industrial sector established.	0.66	0.66	0.66	0.66	2.64
Total	6.60	6.60	6.60	6.60	26.40

*Outcome and outputs are numbered as they build upon the existing framework of DEPP III in Vietnam. With this approach, the numbering of outputs is consistent with the updated result framework for DEPP III in Vietnam.

In addition to the country-specific budgets as presented above, DEPP III will be strengthened by an unallocated reserve of 5 million DKK, bringing the total amount of unallocated funds to a level of 12 percent of the total budget for DEPP III. The unallocated funds will allow new and existing partners to apply for support to interventions beyond their approved results framework, when an unforeseeable

and strategic opportunity arises that will contribute to the objective of the DEPP III. Approval of unallocated funds will be based on criteria described in chapter 8.

Budget allocations for the enhanced support to DEPP III partnerships:

Country	Budget allocation as part of the additional support (in million DKK)
South Africa	15.0
Vietnam	26.4
Unallocated	5.0
Total	**46.4**

Total updated budget for DEPP III is presented below where the enhanced support has been added to the original budget.

Country	Total updated budget for DEPP III (in million DKK)
South Africa	54.17
China*	53.06
Vietnam	86.68
Mexico*	53.06
Unallocated	36.23
Mid-term review	2.00
Programme support (admin. and communication)	11.18
Total	**296.40**

*The partnerships with China and Mexico are included in DEPP III but is not part of the additional support.

Total updated budgets for each country under DEPP III is available in Annex II.

8. Management and reporting

Management and reporting of the proposed additional activities will follow the overall structure of DEPP III. The management structure and related process are adherent to the adaptive management principles integrated in the framework of Danida Aid Management Guidelines and "Guidelines for Country Strategic Framework, Programmes and Projects". Changes of the project design should always be based on changes in the project context or new knowledge on how to achieve better results.

The DEPP III Advisory Group is overseeing implementation of the DEPP III programme and consists of the responsible Heads of Units in MFA and the MCEU and with DEA as secretary. The Advisory Group will meet on a bi-annual basis, or when required, to discuss progress and solicit lesson learnt from cross-programme countries experience. The Advisory Group can advise the involved Danish embassies on strategic actions to be pursued in policy dialogues on the energy and climate change agenda in the countries. The Advisory Group is responsible for decisions of changing partners and outcomes of the project and for approving programming for the unallocated programme funds.

The objective for the unallocated funds is to assist new and existing partners in their contribution towards the agreed country objective within one of the following areas: i) Dissemination of lessons learned across the partnership countries that would stimulate cross fertilization; ii) Activating partnerships between Civil Society Organisations and academia[2]; iii) Activities that will address barriers and opportunities to mobilize and leverage of funds; and iv) Promote a policy agenda of interest for both Denmark and the partner country.

Applications for the use of unallocated funds will be evaluated against the following criteria: i) Clear contribution to the DEPP III strategic objective as well as country objective; ii) Documented partner interest and commitment.

The country steering committees are co-chaired by partner country representatives and the Danish Ambassador in the country. The steering committee members include representatives from each engagement partner, other relevant authorities and DEA. The Steering Committees meet as a minimum once per year to approve the Annual Partnership Country Programme progress report and the annual work plans. Work plans should include a risk evaluation and adjustments to be applied if e.g identified risks occurs. The steering Committee can decide to change outputs in the country programme. The Steering Committee is also a forum for policy dialogue.

Based on analysis and proposals from the working groups, the Steering committee will evaluate changes in the country project context and identify new opportunities and knowledge on how to achieve better project results, including how cooperation with bilateral donors, EU and Multilateral Development Banks can be utilised to the benefit of the project activities. The Steering Committee will make a regular evaluation of risks to the implementation of the project. The influence of COVID-19

[2] An example of partnerships with academia using DEPP III unallocated funds is a new partnership between Hanoi University, Geological Survey of Denmark and Greenland (GEUS) and DEA supporting a geological assessment of the seabed in Vietnam in the context of offshore wind energy.

restrictions and the resulting need to allow day-to-day flexibility of work plans is an important task of the Steering Committee

Implementation Groups coordinate and manage daily implementation of the annual work programmes. The members are representatives from partner institutions, DEA, Long Term Advisors and the energy sector advisor at the embassy. The Implementation Group will meet at least twice per year and has the responsibility to: i) develop, consolidate and check annual work-plans; ii) monitor programme progress at output level, iii) ensure cross fertilisation within and between engagements and iv) identify new opportunities for cooperating with other donors.

The working group will provide the needed material for the work of the Steering Committee, including proposal for use of unallocated funds, identification of concrete opportunities for cooperation with other donors, development banks et cetera and proposals for adjusting to changes in the project context and risks for setback in project implementation.

DEA will report on progress, results and financial management to the MFA once a year in accordance with the Aid Management Guidelines. Annual reporting and mid-year reporting will be submitted to the Advisory Group.

9. Risk analysis

A risk analysis has been performed for the additional funding and related outputs under DEPP III. The analysis for the additional funding complements the overall risk assessment for DEPP III, which is available in Annex III. It is important to emphasize that all partners engaged in the additional funding are well-known to DEA as they are existing partners under DEPP III. Previously engagements have been largely successful and all partners involved in the additional engagements have requested Danish support for the proposed activities in a government-to-government modality. Nevertheless there are both contextual, programmatic and institutional risks which need to be carefully examined and reflected upon as part of the programme.

The Covid-19 pandemic is considered a dominant and cross-cutting risk to project implementation in both countries, as it limits the options for travelling to partner countries. Partners may also be affected by Covid-19 lock-downs forcing them to work from home, which may hamper the performance of the partner institutions. After more than a year with global COVID 19 restrictions in force, the DEA considers their professional relations to be intact and well performing in all DEPP countries. Work plans have been changed with short notice and planned workshops, visits and meetings have been adapted to a virtual setting. The long-term and trust based partnerships under DEPP III are an essential mitigating factor, which enables DEA and partners to continue collaboration and implement activities. Another mitigating factor is the presence of DEA long-term advisors at the host ministries and the energy sector advisors at the embassies, which ensures direct interactions with partners.

South Africa

- Difficulties in attaining permits from landowners is a risk, as it may affect the ability to erect the measurement masts during the period of the wind measurement. A measurement mast requires a ground area of a few square meters. All masts will be removed after the wind measurement

campaign ends. Therefore, permits are only required during the actual implementation of the WASA 4. During previous phases of WASA, permits to access land and roads have been secured by short-term leasing contracts with landowners. If access to land cannot be secured, WASA 4 will identity alternative sites. The residual risk is considered minor, as previous phases of WASA have been successful in obtaining permits to access land.

- Failure of the consortium to implement the WASA 4 project is a risk. However, the consortium implementing WASA 4 is well established and has been successful under previous phases of WASA.

Vietnam

- A key risk factor is a potential lack of available finance on the commercial market to support energy efficiency investments at energy-intensive industries. The risk is mitigated by the energy audits that provide validated guidance on the most cost effective measures and the establishment of the Centre of Excellence to engage third party stakeholders (e.g. financing, technology providers, equipment, solution suppliers) in assisting enterprises with implementation of proposed energy efficiency measures. The residual risk is considered as low.

10. Annexes

1. **DEPP III programme document**
2. **Vietnam and South Africa country project documents**
3. **Result framework for DEPP 3 including additional outcomes and outputs**
4. **Budget details**
5. **Risk Management**
6. **Process Action Plan**
7. **Appraisal summary and recommendations**

Annex 1. DEPP III programme document 2020

Danish Ministry of Foreign Affairs of Denmark (MFA) **DANIDA**

Danish Ministry of Climate, Energy and Utilities (MCEU)

Danish Energy Partnership Programme III
2020-2025
with
China, Vietnam, South Africa and Mexico

Programme Document

Final

17 August 2020

Abbreviations

AMG – Danida Aid Management Guidelines

CENACE – National Energy Control Centre (Mexico)

CIFF – Children's Investment Fund Foundation

CEO - Chinese Energy Outlook

CO_2 – Carbon dioxide

CONUEE - National Commission on Efficient Use of Energy (Mexico)

COVID-19 – Coronavirus Decease 2019

COP – Conference of the Parties (to the UNFCCC)

CREO – China Renewable Energy Outlook

DE – Development Engagement

DEA – Danish Energy Agency

DEPP – Danish Energy Partnership Programme (China, Mexico, South Africa, and Vietnam)

DED – Development Engagement Document

DoE – Department of Energy (South Africa)

DKK – Danish Kroner

DMRE – Department of Mineral Resources and Energy (South Africa)

DTU – Technical University of Denmark

EE – Energy Efficiency

EESD - Energy Efficiency and Sustainable Development Department (part of MOIT, Vietnam)

ERAV - Electricity Regulatory Authority of Viet Nam (part of MOIT, Vietnam)

EREA - Electricity and Renewable Energy Authority (part of MOIT, Vietnam)

ERI – Energy Research Institute of the NDRC (China)

Eskom - Electricity Supply Commission

FYP – Five-Year Plan

GDP – Gross domestic product

GHG – Greenhouse Gas

GtG – Government to Government

IEA – International Energy Agency

IFU – Investment Fund for Developing Countries (Denmark)

INECC – National Institute on Ecology and Climate Change (Mexico)

IPP-Office – Independent Power Producer Office (South Africa)

IRP – Integrated Resource Plan (South Africa)

LTA – Long-Term Advisor

LULUCF – Land use, Land-use change and Forestry

MCEU – Danish Ministry of Climate, Energy and Utilities

MEE – Ministry of Ecology and Environment (China)

MFA – Ministry of Foreign Affairs of Denmark

MOIT – Ministry of Industry and Trade (Vietnam)

MTR – Mid-Term Review

NCSC - National Center for Climate Change Strategy and International Cooperation (under MEE)

NDC – Nationally Determined Contribution under the Paris Agreement on Climate Change

NDRC – National Development and Reform Commission. (China)

NEA – National Energy Administration (China)

OECD DAC – Organisation for Economic Co-operation and Development -- Development Assistance Committee

PDP – Power Development Plan

PV – Photovoltaic

RDE – Royal Danish Embassy

RE – Renewable energy

SEMARNAT – Ministry of Environment and Natural Resources (Mexico)

SENER – Ministry of Energy (Mexico)

SDG – Sustainable Development Goal

SEC – Strategic Engagement and Cooperation

SMART – Specific, Measurable, Achievable, Relevant and Time-Bound

SSC – Strategic Sector Cooperation

TA – Technical Assistance

ToC – Theory of Change

ToR – Terms of Reference

UNFCCC – United Nations Framework Convention on Climate Change

USD – United States Dollars

VRE - Variable Renewable Energy

Table of Contents

1. Introduction

The Paris Agreement's central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise well below 2 degrees Celsius above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 degrees Celsius. However, the current level of commitment - the Nationally Determined Contribution (NDC) put forward by parties having formally joined the Paris Agreement - puts the world on track for an approximately 3 degree global mean temperature increase above pre-industrial levels.

In support of Denmark's commitment to the Paris Agreement's goal, the Danish Government in December 2019 passed one of the most ambitious climate laws in the world targeting reductions in Denmark's greenhouse gas (GHG) emissions by 70% in 2030 compared to 1990 levels, and aiming for enhanced global efforts to assist the largest emitters of GHGs to raise their national climate ambitions. Also, Denmark's Strategy for Development Cooperation and Humanitarian Action, "The World 2030", emphasis that the Paris Agreement and the Sustainable Development Goals (SDGs) shape the course for increased investments in resource-effective and sustainable energy where Denmark has strong competencies.

To address the global challenge of climate change, the Danish Climate Envelope was established in 2008 to support climate change mitigation and adaptation in developing countries via bilateral and multilateral interventions. The Climate Envelope has funded energy related climate change mitigation programmes with China, Vietnam, South Africa and Mexico since 2012, with Ethiopia since 2016 and with India since 2019. The Danish Energy Partnership Programme (DEPP II) was approved in June 2017 with a 3-year implementation period and a total budget of 115 million DKK, covering China, Vietnam, South Africa and Mexico, all transition and growth economies highlighted in The World 2030 as countries where partnership initiatives and government-to-government (GtG) cooperation are particular relevant for Denmark in order to support appropriate strategic choices for the countries sustainable development and for global reaching of the SDGs. A four months no-cost extension period has been granted and the programme will end ultimo October 2020.

The four DEPP III partner countries collectively stand for almost 1/3 of global GHG-emissions and as party to the United Nations Framework Convention on Climate Change (UNFCCC) having joined the Paris Agreement, each of the four DEPP III partner countries must prepare and communicate updated NDCs in 2020 and every five years thereafter. To enhance the ambition over time, the Paris Agreement furthermore provide that successive NDCs must represent a progression compared to the previous NDCs, and for developing countries, domestic emissions reductions must be undertaken in the context of sustainable development and efforts to eradicate poverty.

Based on the strong platform of DEPP II, it has been decided to respond to the above-mentioned by assist in raising the level of ambitions on the NDCs in China, Vietnam, South Africa and Mexico by initiating a DEPP III with a budget of 250 million Danish Kroner (DKK) over five years from 2020 – 2025. The proposed programme is well in line with the Guiding Principles of Danish Climate Envelope, both in terms of overall objectives and in terms of engagement modality.

2. Strategic considerations and justification

Denmark is a front runner in the global effort on mitigating climate change and green solutions. The Danish Climate Act sets forth the national target of 70% reduction in domestic GHG-emissions by 2030 compared to 1990-emissions level and zero net GHG-emissions by 2050 at the latest. The Climate Act also points to the opportunities for Denmark to increase Denmark's international support to the largest Greenhouse Gas (GHG) emitters and developing countries to raise their climate ambitions. Danish international climate support will be provided via enhanced bilateral and multilateral collaboration as well as increased export of Danish technologies related to energy.

For the purpose of strengthening Denmark's global climate actions and climate diplomacy including Denmark's leadership on SDG 7, Denmark's first Climate Ambassador has been appointed and selected Danish embassies – including the embassies in the four DEPP III partner countries, have been nominated as new climate front post missions.

A common denominator of the Paris Agreements goals for preventing global temperature rise, the SDG 7 and also the SDG 13, is the global need to substantially increase the share of renewable energy, reduce energy intensity and phase out use of fossil fuels, all of which is at the core of the proposed DEPP III.

China, Vietnam, South Africa and Mexico have been selected as strategic partners of the DEPP due to their historic, current and forecasted acceleration in energy demand, significant GHG- emissions and the potential for cost efficient reduction of GHGs. The four countries are all important transition economies and their collective total GHG-emissions constitute almost 1/3 of the world's GHG-emissions. Therefore, these countries play a significant role globally in achieving the objective of the Paris Agreement, SDG 7 as well as SDG 13. Based on previous phases of the collaboration, the partner countries see Denmark as a trusted long-term partner and are willing to engage with Denmark on a GtG basis in support of achieving the Paris Agreement.

Denmark and China have agreed *"to continue to strengthen cooperation in the fields of climate change, energy and the environment, research and innovation"* implemented through the China Denmark Joint Work Programme

(2017-2020), which includes joint cooperation on climate and energy. A new agreement between Denmark and China is currently being developed. Similarly, Denmark and Mexico made a joint statement in 2017 and agreed to technical and scientific cooperation in, among other areas, energy and climate change. Strategic partnerships between Denmark and South Africa and between Denmark and Vietnam are under way, where climate change mitigation is a key priority for the partnership, and Vietnam, Mexico and South Africa are furthermore partners to P4G – the Partnership for Green Growth and the Global Goals 2030

All four partner countries have embarked on the 2030 Agenda for Sustainable Development and the global SDGs. DEPP III is therefore relevant in this context as it supports the partnership countries in pursuing SDGs – particularly SDG7 (affordable and clean energy), SDG 8 (decent job, economic growth), SDG 9 (industry, innovation, infrastructure), SDG13 (climate action) and SDG 17 (partnerships for goals).

Global GHG emissions from energy supply contribute to 34% of the global emissions. The GHG-emission levels are still increasing and the ambition level in NDCs presented so far by countries in support for the Paris Agreement puts the world on track for an approximately 3 degree global mean temperature increase above pre-industrial levels. The Paris Agreement states that successive NDCs must represent a progression compared to the previous NDC and reflect its highest possible ambition. However, NDC updates can either be new NDCs with strengthened targets or recommunicated, meaning that GHG reduction targets already set-forth by the country are merely resubmitted and the progression stems from implementation measures or other elements.

By 2020, the Parties to the Paris Agreement shall communicate their updated NDCs. At the time of writing (August 2020), submissions from Mexico, China and South Africa are pending and the Coronavirus Decease (COVID-19) crisis can delay this process as a whole (also in light of the postponement of the Conference of the Parties (COP) 26 to November 2021, where the first initial review of the countries submissions would have taken place). Vietnam has in August 2020 updated their NDC with a slight increase in the GHG reductions target by 2030, however, the Vietnamese NDC has not yet been submitted to the UNFCCC. Moving beyond the 2020 update, 2025 will be the next process of revision and updating of NDCs hence the timing of the DEPP III programme will therefore be fully aligned with this revision cycle of national NDCs. DEPP III will support partner countries in raising their NDC ambitions on climate change mitigation and will be an exemplary instrument for the Danish leadership in achieving SDG 7 in direct collaboration with the partner countries. DEPP III will also serve as an international showcase for the Danish 70% GHG reduction target and frontier solutions for meeting the ambitious target.

To deliver on NDC targets, and to guide decentralised efforts on climate change mitigation and energy targets, DEPP III will have enhanced focus on sub-national level engagement and support for sub-national implementation of renewable energy, energy efficiency and other mitigation related activities as a strategic dimension in China, Vietnam and Mexico. The sub-national approach was introduced under DEPP II and will be further strengthened under DEPP III. In this way, DEPP III will support national governments to roll out policies at sub-national level to ensure effective implementation of a green transition throughout the country. All sub-national activities are fully supportive of national targets.

2.1 Summary of national contexts

The national contexts for China, Vietnam, South Africa and Mexico are described in each of the respective Country Documents in Annex 1. The following table presents and overview of key demographic and socio-economic numbers in the DEPP III partner countries.

	China	**Vietnam**	**South Africa**	**Mexico**
Population -- million	1,393	96	58	126
Surface Area [km^2]	9,562,910	331,230	1,219,090	1,964,375
Population density [persons/km^2]	148.3	308	48	65
Life expectancy [years]	77	75	64	75
Infant mortality rate [per 1.000 live births]	7.4	17	29	11
Gross domestic product (GDP) millions [USD]	13,608,151	245,213	368,289	1,220,699
GDP [current USD/capita]	9,771	2,567	6,374	9,673
Corruption perception index 2019 [rank out of 180]	80th	96th	70th	130th
People living below the poverty line of USD 1.90 a day [% of population]	0.5	1.9	18.9	1.7
People living below the national poverty lines [% of population]	1.7	6.7	55.5	41.9

Numbers in the table are based on most recent data from World Bank Database and Transparency International (Corruption Perception Index).

The national energy and climate related contexts vary across the four partner countries. The following table presents an overview of key emission and energy related figures:

	China	**Vietnam**	**South Africa**	**Mexico**
Total GHG emissions (excl. Land use, Land-use change and Forestry (LULUCF)) [Mt CO_2e]	11,992	270	525	722
GHG emissions per capita (excl. LULUCF) [tons CO_2e]	8.7	3.0	9.7	5.8
Ranking of GHG emitters (excl. LULUCF) worldwide	1st	33rd	16th	12th
Total energy consumption [Mtoe]	2,000	64,1	67,8	122,3
Total electricity consumption [TWh]	6.349	185	227	297,4
Fossil fuel share of total energy mix [% of total]	88.7 %	71.4 %	91.3 %	89.0 %
Renewable energy share of total energy mix [% of total]	5.5 %	9.8 %	0.8 %	3.9 %

GHG-emissions data are based on the most recent data from the World Resources Institute's CAIT Climate Data Explorer. All energy related figures are based on most recent data (2017-level) from the International Energy Agency (IEA).

2.2 Summary of strategic framework and overall strategic objectives

DEPP III is designed to contribute to the Danish Government's priorities on climate change mitigation, hereunder the international perspectives of the Danish Climate Act, SDG 7 and 13, as well as Denmark's strategy for development cooperation and humanitarian action. In accordance with the objective and principles of the Climate Envelope, DEPP III priority will be given to interventions where a transformational and sustainable shift to low carbon development and shift away from fossil fuels can be achieved through enhanced policy frameworks and market structures in partner countries.

Programme interventions will be delivered within four thematic areas where DEA has extensive competence and a comparative advantage over most other leading energy authorities. The four thematic areas are:

- Long-term energy modelling and planning
- Enhanced framework conditions for renewable energy
- Integration of renewable energy and flexibility of the power sector
- Energy efficiency, including district heating

DEPP III will have a particular focus on assisting partner countries to increase the amount of renewable energy used in electricity supplies. The driver for this in partner countries is underlined by the United Nations Environment Programme GAP report from 2019 identifying renewable energy electricity expansion as the sector with greatest GHG reduction potential and pointing to actions to plan for large shares of variable renewable energy; development of flexibility measures to take on larger shares of variable renewable energy in replacement of coal, and; support for deployment of distributed energy; and a 2019 report from International Energy Agency (IEA) highlights that "*energy efficiency calls for bold action by policy makers and investors"*. In partner countries constraints to achieve this include gaps in analytical foundation for impactful policy making and regulation; inadequate framework conditions; limited institutional capacities and sometimes less strong will from political leadership to push for low carbon development through opportune renewable energy expansion and energy efficiency, which should not least be understood in the political economy context of energy sectors in the partner countries.

DEPP III will work with these drivers and constraints, primarily from an energy sector perspective, in order to support implementation of NDCs in combination with ongoing support for partner countries to raise their climate ambitions including for their NDCs updates in 2025. DEPP III partners in Mexico and China are serving as national focal points on climate change in their respective countries, and the cooperation with these partners underlines the strengthened focus in DEPP III on NDCs. Programme interventions with appointed UNFCCC climate focal points in China (the Ministry of Environment and Ecology, MEE) and in Mexico (the Ministry of Environment and Natural resources, SEMARNAT) provides opportunities for enhancing capacities for low carbon planning and development of climate change mitigation policies for the energy sector directly linked to NDC measures and targets. Other partners in all four DEPP countries, are energy ministries and agencies, and engagement with those partners allows for support to NDC implementation, and upscaling of NDC targets and measures via their mandate as line ministries in charge of energy sector planning.

Enhanced policy outreach and engagement with policy makers would be key to help for strengthened commitments by the partner countries for their NDC and the goal of the Paris Agreement. Interventions with policy makers will be pursued by DEPP III as a complementary effort to the

technical engagement with partners on renewable energy and energy efficiency. Interventions at both policy and technical level will promote a coherent and evidence-based framework for long-term decision making on low carbon energy and climate change mitigation.

Based on this the DEPP III's overall strategic objective is defined as:

> *The partnership countries achieve low carbon development, implement the Paris Agreement on Climate Change and continue upscaling and realising their NDC goals.*

Within this overall strategic objective, the programme is in addition well-suited to support partner countries in their sustainable recovery from the COVID-19 pandemic as well in critical national development priorities relating to certain of the co-benefits resulting from sustainable, green transition such as health, environment, security in energy supply, jobs, Just Transition and poverty reduction. Sustainable recovery from COVID-19 could be supported based on countries' individual recovery response in relation to energy and climate change mitigation. An already seen immediate response in partner countries is to safeguard health sector and critical infrastructure from disruptions in electricity supplies. Uninterrupted electricity supply is furthermore essential for people to work and socialise from home during lockdowns. The DEPP III is well-suited to support partners on security of power supply that goes hand in hand with sustainable green transition of the energy sector.

Efforts to ensure sustainable recovery beyond the short-term include financial stimulations packages where public investments are accelerated to spur economic growth and secure jobs. To this end, there is a likely risk that countries invest in generation of energy based on fossil fuels as it is the most well-known avenue to provide for jobs and stimulate economic activity. Under such a scenario, new investments in fossil fuel technologies will trigger technology lock-in and disrupt countries' low carbon plans for decades to come. As an alternative to fossil fuels, DEPP III will assist partners in assessing the potential for investing in cost-efficient renewable energy and energy efficiency as part of a recovery response with a tangible focus on job creation and stimulation of the economy.

2.3 Implementation modality

In line with the Climate Act and the "The World 2030" the overall strategic objective will be pursued through GtG cooperation between Denmark and the particular partner country, in a partnership between equals, through exchange of experience at both policy and operational level to support climate change mitigation in the partner countries.

This provide opportunities to showcase Danish experience from the energy sector and contributes to the Danish lead of the SDG 7 and to the Royal Danish Embassies **(**RDEs) as climate front posts in the partner countries. The RDEs' position as climate front posts is further strengthened through Energy Sector Counsellors posted at the embassies in China, Vietnam and Mexico under the Strategic Sector Corporation (SSC) Programme by the Ministry of Foreign Affairs of Denmark (MFA). Their presence will enhance the linkage between technical assistance and climate diplomacy and DEPP III will support the Energy Sector Counsellors to inform and leverage the policy dialogue in partner countries in

Box 1: Government to Government Cooperation as an effective tool of capacity development

- The DEA is responsible for creating a well-informed and evidence based environment for policy decision making for Denmark to meet the climate mitigation targets of the Danish Climate Act within the energy sector. The DEA is also responsible for formulation and implementation of energy related policies and regulation in Denmark.
- The DEA encompasses four decades of experience for promoting green growth by securing evidence based decision making, formulation of policies and regulatory frameworks as well implementation of policies and regulation for the energy sector.
- DEPP III rests on the shoulders of a well-tested GtG modality for sharing valuable Danish competences on low carbon development and how to combine economic growth while reducing GHG emissions.
- DEA contains unique and hands-on experience for securing frontier levels of energy efficiency, long-term energy planning, favourable framework conditions for renewable energy, and integrating variable renewable energy and security of supply. To a large extent, these experiences are only available to DEPP III partner countries via the GtG modality as other development partners and consultancies do not hold such information.
- DEPP III provides access for partner countries to learn from Danish experiences through a peer-to-peer modality. The direct exchange between partner line ministries/agencies and DEA is to a large degree unrivalled and not provided by other development actors in the partner countries.
- The GtG modality and the DEA as representatives of the Danish central government provides high level of credibility and access to high-level decision makers in the partner countries. Recognized high level of credibility is also a driving force and clear commitment for DEA to deliver world-class expertise to partners under DEPP III.

support of particularly the SDG 7 leadership and Danish climate diplomacy.

DEPP III will be posting Long-Term Advisers (LTAs) in partner institutions. LTAs have proven to be a critical element of the most successful interventions for capacity development under DEPP II. The LTAs deliver technical capacity to partner's organisations and contribute to fruitful and trust-based relationship between the partners and DEA. Together with DEA, the LTAs will secure that partners needs are fully analysed in the preparatory phase of each intervention and that all activities do contribute to partners' priorities and domestic agendas. This will ensure the programme support is well anchored and sustained within the partner institutions. Based on these features, DEPP III will enhance the LTA function by posting two LTAs in Vietnam and Mexico, one and potentially two LTAs in China and one LTA in South Africa.

Making DEPP III a five-year programme makes the programme more robust and with an ability to overcome periodical slow down or rapid changes in partner institutions. Flexibility of the programme is essential to support the partner countries needs throughout a five year implementation period. The requirement for flexibility is elevated by the rapid changing energy sector where technologies and opportunities progress at a high speed while global average costs of renewable energy are decreasing. In order to accommodate for changing needs of the core partners, the programme has allocated 6,5% (DKK 16,226,000) as unallocated funds to support existing partners with new development engagements or new outputs under existing development engagements. The objective for the unallocated funds is to assist existing partners in their contribution towards the agreed country objective within one of the following areas: i) Dissemination of lessons learned across the partnership countries that would stimulate cross fertilization; ii) Activating partnerships between Civil Society Organisation and academia; iii) Activities that will address barriers and opportunities to mobilise and leverage of funds; and iv) Promote a policy agenda of interest for both Denmark and the partner country.

As part of the part of the Paris Agreement, countries are expected to communicate information on GHG-emissions and actions to reduce them, as well as on adaptation and means of implementation such as finance, technology transfer and capacity-building to the UNFCCC. The Enhanced Transparency Framework has been designed internationally to support countries in the required reporting to the UNFCCC. Facilitated by the UNFCCC, the Transparency Framework is not yet operational for countries. However, once operational for partner countries, the DEPP III programme will support partner countries, as requested, on sharing available energy related data and assessments.

2.3.1 Strategic engagement and cooperation

Experience from the previous DEPP programmes has shown that although there are clear and demonstrable pathways to achieve cost-effective transition of the energy sector in parallel with enhanced economic growth, there are additional opportunities to make an incremental strategic push in direction of low carbon development in each DEPP III country by supporting DEPP III non-core partners. Therefore, to complement support to DEPP III partnerships, 6% of the DEPP III budget (DKK 15 million) is unallocated, reserved for Strategic Engagement and Cooperation (SEC) eligible for all four countries and aimed for activities with non-core partners.

The purpose of SEC is to support an enabling environment for informed decision making, policy dialogue, climate diplomacy and ultimately transformational change towards low carbon development of the energy sector by entering into new partnerships with civil society, the private sector actors, academia and multilateral organisations, and other complementary parties.

The approach is to strengthen participation in the discussion and information exchange around the low carbon energy development agenda in a variety of public forums through cooperation with technical and non-technical stakeholders, outside the core circle of existing partners. To support such activities, SEC funds are available at programme level to support SEC activities in the countries or regionally, in addition to the main DEPP III support through the established development engagements.

The SEC support contributes to achieving the strategic objective of DEPP III through the following overall outcome:

> *Low-carbon pathways, cost efficient NDC implementation and upscaling of NDC targets within the energy sector are enabled based on collaboration, exchange of information and awareness raising with non-core partners focusing on energy and climate change mitigation topics.*

The indicator for SEC is defined as number of strategic engagements with civil society, the private sector, academia and multilateral organizations conducted to support low carbon development, NDC implementation and upscaling of NDC targets in the country.

Based on the above outcome and indicator, SEC improves the enabling environment for technical and policy development on energy and climate change mitigation topics which will support accelerated implementation of current NDC targets and upscaling of future NDC targets. Due to the uniform focus on low carbon pathways, cost efficient NDC implementation and upscaling of NDC targets, the SEC outcome and activities with DEPP III non-core partners will contribute to the overall strategic objective and country objectives of DEPP III.

Themes to be supported by SEC may fall within the following areas of engagement:

- Enhanced policy dialogue and climate diplomacy on energy and climate change mitigation
- Enhanced cooperation and coordination with multilateral organisations, particularly Danish funded multilateral initiatives engaged in low carbon development in the partner countries
- Interaction with civil society regarding climate change mitigation, Just Transition, gender equality, public outreach and advocacy for low carbon development
- Support framework conditions for private sector engagement in support of the Paris Agreement, and SDG 7 and 13
- Enhanced cooperation with financial organisations to promote an enabling environment for investments in renewable energy and other areas in support of low carbon development in the partner country

- Increased cooperation and coordination with academia
- Increased south-to-south cooperation between DEPP III partners and other relevant actors

Identification of relevant SEC activities will be a joint process between Energy Sector Counsellors at RDEs, LTAs, DEA and identified SEC partner. SEC partners are anticipated to provide internal resources, financial or in-kind, as part of the mutual collaboration. Operational procedures for SEC is described in annex 5.

2.4 Past results and lessons learned

DEPP III rests on the experience and lessons learned from partnerships with China, Vietnam, South Africa and Mexico developed since 2012 through separate bilateral programmes and under DEPP II.

Good partnerships were established with relevant partners in Mexico, China, South Africa and Vietnam prior to DEPP II in the period from 2012 to 2017. The partnerships were designed as individual bilateral programmes which the DEA contributed to. In Vietnam and South Africa, the RDEs were the responsible implementing partners and in Mexico most of the implementation was outsourced to Danish external consultants. Mid-term and final reviews were conducted by Ministry of Foreign Affairs of Denmark **(**MFA) for all four bilateral country programmes. The findings and recommendations informed the design of DEPP II.

The three-year DEPP II (2017-2020) was designed as a GtG cooperation with all four countries with the objective to support partner countries in low carbon development in compliance with their global climate commitments by sharing DEA's and Danish experiences on de-carbonization of the energy sector. The programme applied a focused and systematic approach to reduce GHG emissions by enhancing partners' capacities to create an enabling and sustainable environment for low carbon development within the energy sector. Four thematic areas of support were defined and consolidated as highly demanded from partners in combination with frontier Danish experience to share, which continues to apply, and the thematic areas have all been carried over to DEPP III.

DEPP II also included systematic posting of LTAs within partners institutions as a key driver for securing continuous and demand responsive support to partners. An elaborated management system with high level Steering Committees in partner countries, implementations groups, direct involvement of the EDKs, etc. were defined.

The DEPP II has promoted major adjustments to energy sector modelling, planning and management which are on track to have long-term impacts of potentially national significance. It has been imperative

to retain the key elements of capacity development that have been central to this success and integrate them into DEPP III.

The GtG model for the cooperation applied in DEPP II has been rated highly valuable by the partners. The demand-responsive approach, whereby DEA can quickly adjust to changing political situations and urgent needs, has been confirmed by partners to be extremely important and increased the value of DEA's support. The RDEs in the four partner countries have found DEPP II to be of strategic importance for Denmark and the partner countries, and as a valuable platform to leverage bilateral climate diplomacy and general policy dialogue.

2.4.1 Reviews and assessments of DEPP II

A Mid-term review (MTR) of the DEPP II, carried out in the spring of 2019, confirmed that DEPP II is an important vehicle for facilitating long-lasting energy cooperation between Denmark and the partner countries. The MTR also found the programme highly relevant for partner countries' efforts to realise national policies and targets to reduce GHG emissions and to undertake a green energy transition. The MTR verified the technical focus areas as highly relevant to support further uptake of renewable energy in the countries.

The focus of DEPP II on its four thematic areas of cutting-edge expertise has been successful. MTR and national partners found the programme highly relevant in all countries. The DEPP II contributions to national energy planning, improved framework conditions for renewable energy, integration of renewable energy and energy efficiency are highly relevant topics that facilitate a more efficient way of reaching national energy and climate targets in the countries.

The MTR also included a number of valuable recommendations for improving the overall performance of DEPP II as well as future programmes. Key recommendations include enhance effort to alignment with partners internal work plans; develop and document the approach for capacity development by collecting lessons learned with partners, including when to use national consultants in the partner countries, international consultants and staff from the Danish authorities; further elaboration and scope of Terms of References (ToR) for DEA's tasks; and improving the links between DEPP II and the RDEs. Findings and recommendations of the MTR are reflected in the DEPP III and overview of the recommendations from the DEPP II MTR as well recommendations from the Danida Programme Committee to DEPP III is presented in annex 4.

Other sources to assess the GtG approach can be found in the 2020 evaluation of the SSC Initiative which share a number of key features with DEPP II/III in terms of GtG cooperation between Danish public authorities and partner authorities in transition economies and middle-income countries on

topics where Denmark has particular knowledge and experience to share. The Danish SSC projects on renewable energy in India and Indonesia implemented by the DEA were evaluated as case studies as part of the evaluation. The SSC projects on renewable energy is implemented by the DEA.

One of the preliminary key findings of the evaluation (the report is at the time of writing not available in its final version) is that the SSC Initiative is contributing towards stronger bilateral relations and cooperation between Denmark and partner countries. SSC projects have been instrumental in this process as the projects have added substance to diplomacy and provide access for Danish embassies to the governments in the partner countries. This was particularly evident in transition economies and in middle-income countries. The evaluation also underpins that "*the pre-selection of sectors with strong Danish expertise and international reputation is a key factor for success. The ability of SSC projects to showcase Danish reforms, Public-private partnership solutions and leading technologies, enhance the relevance of SSC contributions and underpin the credibility of Danish authorities and Denmark".*

DEPP II and DEPP III use a similar and more consolidated GtG approach on the same thematic areas. DEPP II have demonstrated a similar ability to foster sector and bilateral diplomacy. The ability to promote bilateral relations on areas where Denmark has strong experience and good international reputation is further articulated in DEPP III as part of the Danish climate diplomacy delivered by DEPP III as well as Danish embassies in support of the NDCs and SDG 7 and 13.

Interventions under DEPP II have also been reviewed by other relevant stakeholders. In June 2020 Jørgen Delman, Professor at Department of Cross-Cultural and Regional Studies at University of Copenhagen published the article "Policy Translation and Energy Transition in China". The article is assesses "*China's leadership is in the middle of overseeing a green transition of the Chinese energy system that aims to replace fossil fuels with clean energy*" and how the Chinese – Danish GtG cooperation on energy in the period 2012 - 2020 implemented by DEA has supported this process. Delman finds that relevant Chinese authorities "*..see Denmark as a best-practice learning case, and through a strategic government- to-government partnership, Denmark has gradually become one of China's preferred strategic policy interlocutors on energy politics*". Delman also finds that China Renewable Energy Center (CNREC) supported by previous DEPP programmes is a manifest example of direct Danish influence on Chinese energy policy.

Similar in China, the Children's Investment Fund Foundation (CIFF) is a donor supporting CNREC. Children's Investment Fund Foundation (CIFF) is the world's largest philanthropy that focuses specifically on improving children's lives. In October 2019, CIFF performed a review of the funding support to CNREC and technical engagement concerning the China Renewable Energy Outlook (CREO) which has been produced by the DEPP II programme in China. The review found that China Renewable Energy Outlook (CREO) has engaged key stakeholders and communicated research results and that CNREC has matured and built its technical capacity and is now in a position to influence the

attitudes towards renewable energy in China. The review recommended CIFF financial support to CNREC should continue and that future activities should address the broader energy sector more holistically. DEPP III's development of a Chinese Energy Outlook addressing a broader range of the Chinese energy sector is directly aligned with the recommendation from the CIFF review.

2.4.2 Key results and lessons learned from DEPP II

Long-term energy modelling and planning has resulted in several renewable energy outlook reports – assessing energy scenarios with proposal for roadmaps and policy actions to be taken for various climate scenarios (e.g. business as usual vs. 1.5 degree Celsius) with a 20 – 30 year outlook. The underlying substance of technical work leading to the final reports have been highly relevant outputs of DEPP II in Vietnam and China contributing to national policy development and leading to significant policy dialogue.

The 2019 CREO was presented at the COP25 in Madrid, December 2019, with presence and following high level dialogue between the Vice Minister of the Ministry of Ecology and Environment of the People's Republic of China and the Danish Minister of Climate, Energy and Utility. The report shows that it is possible for China to reduce annual carbon dioxide (CO_2) emissions by more than 7 billion tons in 2050. Thereby, China will produce only a quarter of today's emissions, and succeed with its national contribution to keeping global warming below 2 degrees. All without increasing the cost of energy. Through the Chinese partners' work for the national energy authorities, the results of the cooperation including the CREO, has delivered input to the preparation of the next Chinese Five Year Plan for Renewable Energy Development as well as China's medium-term and long-term energy strategy development.

During the DEPP II, the world has experienced a significant reduction in prices for solar photovoltaic (PV) and wind energy. Both energy sources are new, directly costs competitive with fossils fuels if the right framework conditions and capacities to integrate fluctuating renewable energy are in place. The availability of the commercially viable solar and wind technologies creates a strong demand from partners to advance their capacities for managing renewable energy.

Enhanced framework conditions for renewable energy and integration of renewable energy and flexibility of the power sector are separate, yet highly interlinked working areas. In South Africa, the DEPP II has advanced ESKOM's capabilities to manage operational flexibility of coal based thermal power plants, increased forecasting of renewable energy and better integration of renewable energy. Similar results have been achieved in Mexico, where capabilities of CENACE - the National Energy Control Centre - have advanced in real time forecasting and planning allowing for more efficient integration of renewable energy and less use of conventional generation units, hence avoiding GHG-emissions. Energinet, the Danish transmission system operator (TSO), has played a key part in sharing

Danish expertise from a TSO perspective which has been complemented by DEA's regulatory expertise. The line of work is highly technical and a lesson learned is that all activities needs to contextualize to the national circumstances in order to promote solutions that are directly applicable to the partners.

On the topic of power plant flexibility, DEPP II has made it possible for Chinese partners to adapt Danish knowhow on power plant flexibility in the Chinese energy system. The adapted measures for power plant flexibility has led to an annual reduction in coal fired power plants equivalent to 22 million tons of CO_2. The optimized use of energy in China is equivalent to Denmark increasing the offshore wind capacity fourfold.

Another lesson learned is that support for renewable energy framework condition, integration of renewable energy and flexibility of the power sector are vital stepping stones for countries to leapfrog their low carbon development within the energy sector. As an example, an effective integration of renewable energy sources is a critical requirement for countries to benefit from low global prices on wind and solar technologies. Without such integration, countries will not be able to leapfrog their development or to upscale their NDC targets in a cost effective manner.

Box 2: Vietnamese Energy Outlook Report – elevated policy dialogue and extensive capacity development

The Vietnamese Energy Outlook Report (EOR), developed through the partnership between DEA and the Vietnamese Ministry of Industry and Trade (MOIT) under DEPP II, presents the future Vietnamese energy system towards 2050, through various scenarios that include highly ambitious and sustainable development pathways in comparison with business-as-usual, and display consequences for air pollution and reliance on coal and oil import. Scenarios demonstrate how Vietnam can raise their NDC ambitions, which has led to a series of recommendations that include possibilities of large-scale renewable energy integration and energy savings. Vietnam Energy Outlook Report illustrates the potential for climate change mitigation as well as economic benefits of low carbon development which has positive impacts on socio-economic development. In addition, the Vietnam Energy Outlook Report puts emphasis on externalities of fossil fuels such as local air pollution in major cities in order to display to true costs of fossil fuels.

The EOR was, through the partnership, published first time in 2017 and second time in 2019 with substantial media coverage. The recommendations in 2019 were presented to and discussed with high ranking decision-makers in Vietnam, including with the Chairman of the Central Economic Commission and the Chairman of the Commission for Science,

Technology and Environment of the National Assembly. This has led to the EOR 19 now informing the preparation of the 8th Power Development Plan for Vietnam – a legal binding document for Vietnam's power system 2021 – 2030 with a vision towards 2045. In February 2020, Vietnam's Politburo released Resolution 55, which outlines guidelines for the development of the energy system. A comparison with the EOR19 shows that Resolution 55 inherited several important recommendations from the EOR19, which in turn underlines the impact DEPP has in Vietnam.

The DEA-MOIT partnership, with peer-to-peer twinning and collaboration has been essential for development of the EOR, where DEA has contributed with extensive capacity development through training, technical dialogue and stakeholder consultation workshop, which has developed MOIT's buy-in and ownership of the process and final product.

Capacity development of the Vietnamese partners in the open source computer models – Balmorel and TIMES, developed by Danish researchers and international consultants– has been essential in analysing the extensive data that has been collected. A number of technical background reports have been produced to ensure the most reliable inputs. These include Vietnam Technology Catalogue; Fuel Price Projections; TIMES Data Report; Balmorel Data Report, and; Grid Modelling Report. Data presented in the EOR is based on extensive data collection, consultations and involvement of Vietnamese stakeholders and experts.

2.5 DEPP III justification and OECD DAC

The DEPP III will target low carbon development in partner countries by supporting the implementation of the NDCs and continues upscaling of their NDC goals while focusing on the energy sector. Partner countries have expressed a clear demand for technical assistance to support a sustainable transition of partner's energy systems and improved framework conditions for mitigation of climate change.

DEPP III countries are interested in learning from the Danish experience and willing to commit substantial resources and make significant policy changes as the DEPP I and DEPP II have proven valuable and relevant in the past. Partner countries have experienced that the GtG cooperation with DEA leads to tangible results in terms of institutional capacity development for managing the energy sector, interventions to support GHG reductions as well-informed environment for policy decision making.

Long-term energy modelling and planning is an essential part the support to assist countries in identifying and prioritising the most cost-efficient pathways to achieving the NDC targets within the

energy sector in all four partner countries. A driving factor for enhancing the NDC targets will be reduced costs of solar and wind energy. In addition, Denmark can demonstrate socio-economic benefits and job creation in transition to a cost-effective large share of renewable energy on a low carbon pathway.

Denmark is a front runner on climate mitigation, and DEA and Energinet possess specials skills that are unique in assisting the partner countries in enhancing framework conditions for renewable energy electricity expansions as the intervention area with the greatest GHG reduction potential. As a consequence of limited enabling framework conditions in the DEPP III partner countries, prices of renewable energy are significantly higher than in the EU. Denmark's support to improving the framework conditions is a vital driver to unlock the commercial potential for renewable energy in the partner countries and will establish a level playing fields in bidding for renewable energy concessions to enable fair competition, in which Danish developers and power producers can also participate.

Limited capacity to do forecasting is a general constraint in the DEPP III partner countries to integrate renewable energy, as is limited flexibility in thermal power production (except for Mexico). This leads to significant curtailment, i.e. loss, of renewable energy integration and result in unnecessary release of CO_2 and significant loss of income for both government and private sector. Greater flexibility in the power system, including better forecasting with higher and smarter integration of renewable energy, is an important avenue to a low carbon pathway. Through Energinet, the partners get unique access to experts that can assist the partner countries' System Operators in optimising renewable energy integration.

Energy efficiency is considered "first fuel" – a source of energy in its own right and much cheaper than investments in complex and costly energy sources. DEA has vast experience in energy efficiency and Danish experience suggests that a holistic set of policies – from incentives to regulation – sets out a clear trajectory and gives strong signals to the market. Denmark also possess significant technical solutions from many years working in energy efficiency.

DEPP III and DEA's close relationship with energy and climate institutions in the partner countries can be leveraged in Denmark's climate policy dialogue with partners. DEPP III will provide easier access to important decision makers for the RDEs, which is particularly important as these are now "climate front posts". DEPP III will also serve as platform to convey policy bilateral dialogue at the COPs or other UNFCCC related events.

2.5.1 Justification of the programme according to DAC criteria for DEPP III

The Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) has laid out six evaluation criteria (relevance, coherence, effectiveness, efficiency, impact and sustainability) which have come to serve as the core reference for evaluating international cooperation projects and programmes. The DEPP III objective in each of the partner countries is that the country develops a sustainable and low carbon energy mix in accordance with its NDC targets, which will enable it to upscale NDC targets by 2025. This will be achieved through two or three Development Engagements in each country that have been designed in close collaboration with partners to meet DAC criteria, i.e. to ensure that: all interventions should be relevant to the context, achieve their objectives, deliver results in an efficient way, and have positive impacts that last. By this, the DEPP III is eligible to the criteria of the Organisation for Economic Co-operation and Development - Development Assistance Committee (OECD DAC) as it supports four developing countries in meeting their national obligations under the Paris Agreement with due consideration of – and additional direct and indirect contributions to national, critical sustainable development priorities.

Relevance - the extent to which the activity is suited to the priorities and policies of the target group, recipient and donor: The partnership country programme and its development engagements are aligned to the partner Governments' priorities, not only their commitments to meeting NDC targets, but their domestic priorities including providing clean, affordable energy to all of their citizens and their strategic shift to renewable energy and more efficient use of energy. The Development Engagements assist government policy formulation and make information available to other stakeholders. Interventions are identified where Denmark adds value in terms of national strengths and competence, in particular in relation to renewable energy, energy efficiency, energy planning and the reform of policy frameworks. The inputs required from DEA are well aligned with its core competences and its overall objectives for DEPP III.

Coherence - the compatibility of the intervention with other interventions in a country, sector or institution: There is a need for coherence, so that the synergies (or trade-offs) between policy areas can be identified, particularly with regard to the climate emergency. DEPP III pays great attention to the need to achieve energy transition whilst maintaining economic growth and impacting other priorities such as public health benefits of reduced air pollution, energy security and employment opportunities. DEPP also addresses interlinkages between the intervention and other activities carried out by the other government institutions in the sector (so-called "internal coherence") as well as complementarity, and coordination with other development partners and avoiding duplication of effort ("external coherence"). All four partner countries actively engage with other development partners on the topics of climate change mitigation and clean energy development. DEPP III preparation included meetings with the most relevant agencies to identify areas of synergy and avoid risks of duplication. Enhanced donor coordination under the leadership of the host government will be carried out and further donor coordination will be conducted via the Energy Sector counsellor or equivalent at the RDE.

Effectiveness - the extent to which an activity attains its objectives: Priority of the DEPP III is given to interventions where transformational change to renewable energy and energy planning can lead to cost-neutral or even financially advantageous changes to policies and market structures. This includes particularly changes to existing systems and structures where partners have already expressed the desire to implement reform, including in policy, plans and technological renewal.

Efficiency - the use of the least costly resources in order to achieve the desired results: The cooperation in DEPP III builds upon the relationships established in the DEPP programmes since 2012, ensuring that the approaches and methodologies are driven by partner demand, and have already been tested and deemed fit-for-purpose. This will ensure reduced establishment costs and economies of scale. The partnership approach where the technical assistance on each assignment is directly paired with a peer partner in the institution of the development engagement have been expressed by partners to be the preferred option, because it, unlike other development partners support, generates flexibility, is tailor-made to the institutions specific needs and it provides direct input to the partner institutions mandates.

Impact - the effects on social, economic, environmental and other development indicators: The four partner countries have been identified as amongst the nations with the highest potential for reduction of GHG emissions. If successfully implemented DEPP III will lead to cleaner lower cost energy, with more reliable and stable electricity supply from the grid. The impacts will make a contribution not only towards the global aim of limiting global temperature rise but would also be help indirectly to generate more jobs and reduce poverty, reduce air pollution thereby contributing to public health, and improve governance with the opening up of policy formulation to public scrutiny through regional and national energy outlook reports as well as other technical reports.

Sustainability - whether the benefits are likely to continue after external support has been withdrawn: The design and methodology of DEPP III put a great premium on the institutional transformation and long-term sustainability of the interventions. Written outputs are designed to be internal partner government-owned documents and the implementation strategy is to create a situation whereby the partner can fully assume the long-term responsibility for updating, replication and dissemination of programme outputs, eventually integrating the necessary system and procedural changes into their working practices. In China and Vietnam, the production and dissemination of the energy outlook reports will enable stakeholders in and out of government to assess options for energy production, associated pathways and hold decision makers to account. In South Africa and Mexico, information and learning sharing platforms will serve the same purpose. The benefits of this approach will create an ongoing demand for information that will be a further incentive for partners to continue programme approaches after programme closure.

2.6 Danish strength, interests and opportunities

The DEPP III has been developed with a clear recognition of the specific areas of DEA's competences and partnership modalities that best match the priorities and needs of the partner countries. Over the past decades GHG emissions from domestic emissions sources in Denmark have been decoupled from economic growth. Denmark has historically been able to make cost-effective GHG reductions with positive impact on employment. Available Danish competences include long-term planning, including models and scenarios, de-risking of investments in renewable energy, public-private sector cooperation that has fostered important innovation and breakthroughs in the Danish energy concepts, incentives schemes for energy efficiency and flexible marked-based energy system, and maintaining a high security of electricity supply. Danish domestic competences and solutions will be further accelerated over the coming years to meet the 70% reduction target by 2030 stipulated in the Climate Act. New interventions for meeting this ambitious target call for an integrated and innovative approach to energy management and methods for GHG reduction. DEA is in the forefront on this development and will be able immediately to apply these lessons in DEPP III.

Denmark has a strong interest in strengthening GtG cooperation through sharing DEAs experience with DEPP III partner countries to support global achievements towards the Paris Agreement and SDG targets. The current potential and projected demand for green solutions are also expected to increase in partner countries in the future. DEPP III results will therefore create opportunities to accelerate the use of renewable energy and energy efficiency solutions which will be beneficial for both national, international and Danish project developers and technology providers.

In addition, DEPP III, jointly with the Energy Sector Counsellors, will keep close dialogue with Danish pension funds, Danish Investment Fund for Developing Countries (IFU), Danish Export Credit Fund (EKF) and Danida Sustainable Infrastructure Finance to investigate synergies and areas of collaboration between DEPP III and Danish programmes for green investments in partner countries. To the extent possible, DEPP III will support mobilisation of Danish green investments in the partner countries.

Business opportunities for Danish companies targeted at SDG 7 is, by the MFA[3], estimated to reach approximately United States Dollars (USD) 5.5 billion by 2030. State of Green – a joint partnership between the Danish Government (50% ownership) and the Danish private sector (50% ownership) – promotes green solutions from Denmark to international partners, where China is rated a top priority and Vietnam, South Africa and Mexico are rated as countries with strategic interest. Some of the barriers for the Danish private sectors' penetration of emerging markets are challenges by bureaucracy due to opaque markets and uneven playing fields, corruption, lack of networks and poor country knowledge and knowledge of market opportunities. DEPP III indirectly provide opportunities for

[3] A world of opportunities for Danish Businesses, Ministry of Foreign Affairs, 2019

Danish private sector engagements through work on policy and market improvements developing levelled playing fields.

Denmark's tradition with an active civil society on energy since 1975 is a valuable experience that has pushed the energy agenda in Denmark towards renewable energy. DEPP II established strong linkages for cooperation with both Danish, International and National NGOs and CSOs. This experience will be activated to guide DEPP III partners in their dialogue with local civil society. The Energy Sector Counsellors at the Embassies and DEA will be active in identifying opportunities where civil society can be more actively involved in the programme activities.

Informed by DEPP III and DEA, the Energy Sector Counsellor will actively participate in the development partner community on energy and climate and ensure joint approaches and coordination among development partners. The Energy Sector Counsellor will use the coordination with development partners as an additional avenue to participate in the overall policy dialogue with partner governments.

DEPP III also provides opportunities for the involvement of academia from Danish and partner countries. DEPP III will develop and share information that will enable production of research papers as part of lessons learning and knowledge development, and through exchange studies and potentially informing PhDs. The preferred model for energy modelling, the so-called Balmoral model, is developed with researchers from Denmark. The altering of the model in partner countries is an opportunity to feed useful lessons back to Danish researchers.

3. DEPP III presentation

The DEPP III has been developed in a participatory and partnership-oriented process with the partner institutions in each of the four partner countries. DEPP III will have few and focused outcomes in each country with strategic partners to achieve low carbon development, implement the Paris Agreement on Climate Change and continue to upscale and realise their NDC mitigation goals, through strengthened GtG cooperation between Denmark and the partner countries. This will be done by promoting phase out of fossil fuel, primarily coal, energy production with renewable energy and energy efficiency, where Denmark can offer unique expertise and experience. The overall budget for DEPP III is DKK 250 million including funds for administration and 12% budget reserved as unallocated for programme initiatives and strategic initiatives and intervention.

DEA's Global Cooperation department will be responsible for implementation of DEPP III and will respond to the demands from the partner institutions and their mandate to promote renewable energy

integration, regulating and enhancing energy efficiency and contributing to the countries' ambitions on low carbon pathways.

The support will be delivered through technical assistance. Firstly, through a mixture of technical input from DEA and additional specialists from Energinet and other Danish specialists who will be matched with peers in the partnership institutions. In addition, partnership institutions have requested continuation of longer-term engagements with Danish specialists, which will be honoured by having LTAs placed strategically in their institutions with specific experience from Danish energy transition to generate jointed creation of value and synergy through the peer understanding of development. Finally, the programme will be supported by Sector Counsellors at the RDEs who will facility climate diplomacy, policy dialogue and engagement of the private sector. Finally, national specialists will also be recruited on a needs basis to deliver inputs.

3.1 Theory of Change and Results Framework

The theory of change is that if DEA, based on four decades of experience and expertise from the transition of Denmark's energy system within renewable energy and energy efficiency, through a GtG modality supports with technical assistance and peer learning strengthening the capacity of partner institutions and feeds this into wider policy dialogues, then direct partner institutions will be more effectively able to: i) develop evidence-based policies supporting renewable energy and energy efficiency; ii) improve regulation, planning- and implementation frameworks mitigating barriers for increased use of renewable energy and energy efficiency solutions; iii) enhance regulatory compliance on energy; and iv) support cost-efficient integration of variable energy into the national power systems. Departing from the above, the programme will be managed and implemented with continued attention to relevance, coherence, effectiveness, efficiency, impact and sustainability of the support in accordance with the OECD DAC criteria. The programme and its interventions are also aligned with the principles of the Danish climate envelope.

Partners of DEPP III are mandated as either energy line ministries and sub-ordinated institutions (in Vietnam, Mexico and South Africa) and/or their national research institute (in China), as national climate focal points in charge of the NDCs (in China and in Mexico also the national research institute advising on NDCs), Independent System Operator (in Mexico) and vertically integrated national state entity in charge of production and distribution (Electricity Supply Commission, Eskom, in South Africa). Enhanced capacities of the partner institutions will enable them to accelerate low carbon development while working within their mandates and field of responsibility. GHG-emissions reductions as well as associated sustainable development achievements such as improved environment, health, job creation and poverty reduction are central and inevitable dimensions of low carbon development, and the accelerated use of renewable energy, enhanced performance of the energy sector and energy efficiency is key to reach these achievement. The sphere of influence of DEPP III and the

programme's ability to support GHG-emissions reductions and other sustainable development aspects varies across partners as it will depend on the concrete mandate of the partner institution.

In the case of energy line ministries and sub-ordinated institutions, power producer/TSOs and national research institute, the sphere of influence will primarily be through enhancing partners capacities to develop low carbon sector policies, strategies, regulation, plans or procedures for the energy sector or energy use with high attention to sustainable development. These interventions are subsequently used by the partner institution and national climate focal points to ensure existing NDC targets will be implemented timely and as well to demonstrating the potential for upscaling future NDC mitigation targets by 2025.

The direct partnerships with national climate focal points in China and Mexico will influence and contribute to partners' capacities on energy related aspects in the context of climate change and associated development aspects. GHG emissions from the power sector represent a large share of total GHG emissions in China and Mexico hence the energy sector perspectives are valuable when assessing and designing national plans and policies on climate change mitigation. Enhanced capacities of the partner institutions, developed tools, analytical assessment, plans and policies will be actively applied when promoting low carbon pathways in support of existing NDC targets as well as future NDC targets.

The Results Framework and linkages between country outcomes, country objective and the overall strategic objective of DEPP III is illustrated in figure 1. Each outcome is defined to support the partner's needs for delivering on its national obligations and priorities in the context of low carbon pathways related to energy and NDC implementation and upscaling of future NDC targets. Reaching the country objective will be within DEPP III's sphere of influence but not within the programmes area of control as the country objective is influenced by many factors. Successfully delivered country objectives will provide contributions for partner countries to achieve low carbon development as well as implementation of the Paris Agreement with continuously up-scaled goals which is the strategic objective of DEPP III. The transition from country objective to strategic objective is within the programme's area of influence but not within its direct control.

The theory of change and results framework rests on the assumption that policy makers in partner countries at central government level are seeking and ready to adopt changes that promote energy efficiency, demand management and increased generation and more efficient use of renewable energy, leading to low carbon energy generation.

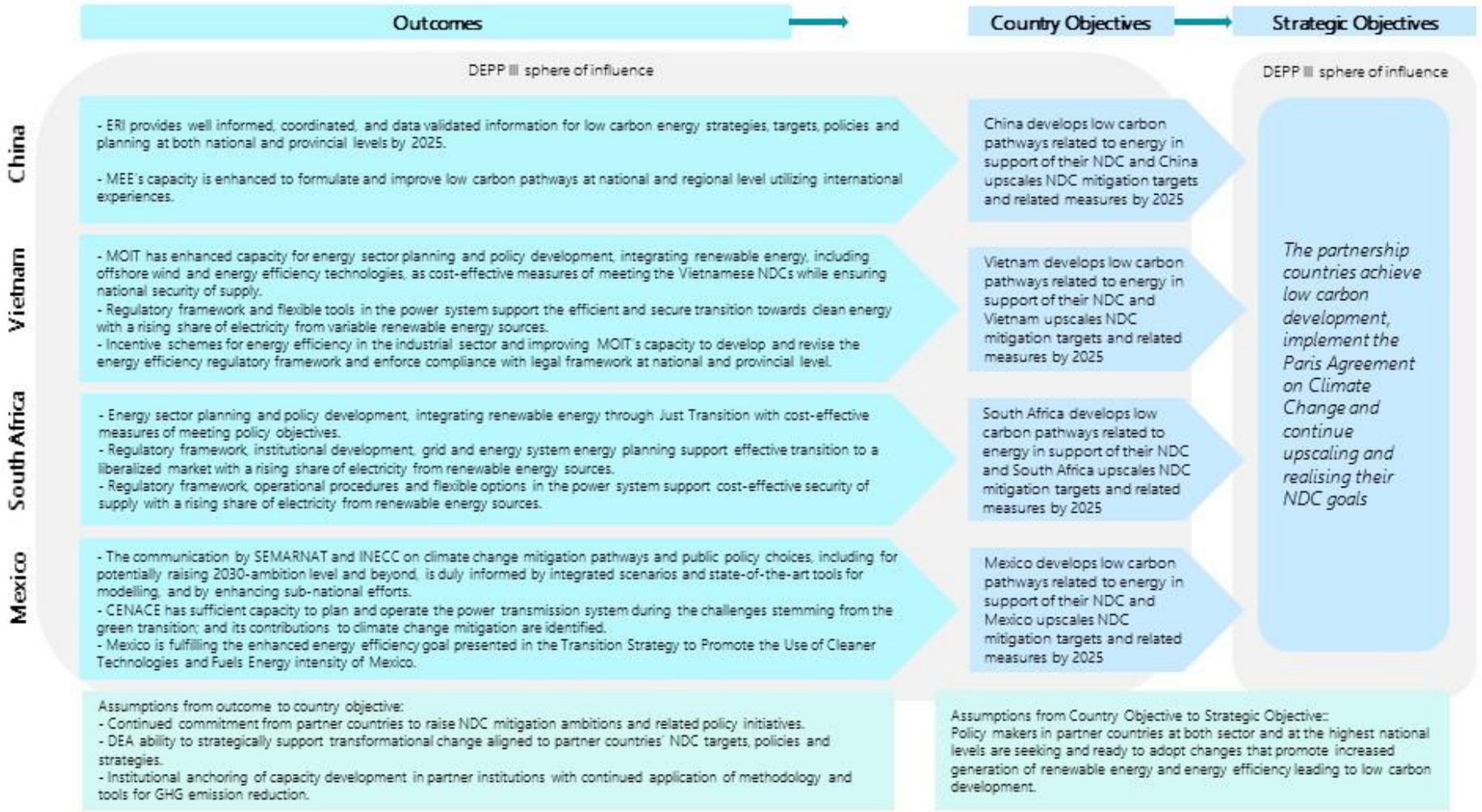


Figure 1: Results and Theory of Change framework

3.2 Risk management

Risks must be assessed in the context of DEPP III, remembering that this is the third phase of programming with these partners, previous phases have been largely successful and that partners have all reaffirmed their supportto continue to engage with Denmark in a GtG modality. Moreover, each partner country have formally joined the Paris Agreement and presented reasonable ambition levels in its current NDCs. Nevertheless there are both contextual, programmatic and institutional risks which need to be carefully addressed and/or reflected upon as part of the programme.

A highly relevant contextual risk common for all partner countries, and increasing programmatic risks, is if the recovery response to the COVID-19 pandemic compromises national ambitions and appetite for investments in low carbon development. As part of a recovery response, partner countries may prefer to invest in fossil fuels expansion with a short term objective to secure jobs and security of supply of electrify based on well-known technologies. This risk will be mitigated by high-level policy dialog, close monitoring of opportunities stemming from international funding opportunities, and continued engagement in identifying cost efficient renewable energy options, whilst demonstrating immediate benefits in terms of such as reliability of electricity supply and job creation.

Another contextual risk relates to recent record low oil prices on the global market. The low oil prices may be considered as a short- to medium-term disruption to the international financial system which may affect both countries importing and exporting oil. Except for Mexico, the electricity sectors in the partner countries are largely coal-based hence low oil prices will not directly affect the business cases or decision making for electricity production negatively. China, Vietnam and South Africa are all net-importers of oil hence low oil prices may be considered advantageous for some sectors. Nonetheless, low oil prices may challenge the comparative advantage presented by renewable energy and energy efficiency and/or motivate investments in oil based technologies. Mexico is a large crude oil producing country, the oil sector is a key driver for the Mexican economy, a main contributor to the federal budget, and the national (state-owned) Petroleum Company is heavily indebted, which already influences the political priorities at the highest level in Mexico for the energy sector development and public investments herein. Risk mitigation of low global oil prices by DEPP III will include close monitoring of price fluctuations which will be reflected in energy modelling and inputs for framework conditions on energy.

A major programmatic risk factor to DEPP III is poor political commitment and leadership resulting in limited or no action to retain low carbon development paths through renewable energy and energy efficiency, and limited political and managerial mandate or abilities to implement policies, strategies and plans supporting green initiatives. The risk is very evident in Mexico where the political energy agenda has a strong focus on domestic fossil fuels resources and less on clean energy. The risk has been mitigated by engaging with relevant partners, such as SEMARNAT, who has the mandate promote low carbon development from a climate perspective rather than core energy perspective. The programme

design includes a high degree of flexibility, partly provided by the unallocated funds, and an up-scaled effort in Mexico will be feasibility if the opportunity to engage in renewable energy should occur.

Based on experiences from DEPP II, a major programme risk factor is the poor or lack of interest and ownership to the cooperation from key partners, which is a particular risk in South Africa. The risk has been mitigated in the programme design by engaging with a high political level who has secured full commitment from the partners. Second, the recent establishment of Department of Mineral Resources and Energy (DMRE) has proven to strengthen the commitment to the DEPP III programme. Third, the programme has engaged with IPP Office as a new partner and where increased the programme's flexibility to prioritize the most active partners and/or engagements where necessary. The application of unallocated funds, including SEC, targeting partners with high ownership will further mitigate this risk.

Other programme risks include limited absorption capacity within partner institutions and that Danish experience may provide too sophisticated solutions to be applied by partners. The participatory approach in development of annual work plans designed to fit the partners and their current level of both human and institutional capacity will mitigate these risks.

COVID-19 also presents a programme risk in related to restricted travel by DEA and international consultants to partner countries which may compromise the effectiveness and efficiency of the programme. Similarly, COVID-19 lock down may reduce partner institutions operational and day-to-day engagement in the programme if staff are working from home. DEPP II has demonstrated ability perform many activities virtually while connecting with partners online. The virtual approach has been applied with success in terms of technical working groups meetings and high level steering committees meetings. DEPP III will apply a similar virtual approach in case of restricted travel and lockdown of partner institutions, hence the residual risk is somewhat reduced. However, it would be clearly more difficult with new partners and engagement of stakeholders, and activities requiring field visits, and the risks will be closely monitored and reported, including to the Advisory Group.

A major reputational/institutional risk for DEPP III is that it could fail to deliver its outcomes, which will reflect negatively on DEA, MCEU, and the MFA. In order to mitigate this risk, the development engagements and results frameworks with Specific, Measurable, Achievable, Relevant and Time bound (SMART) indicators are designed jointly with partners with realistic and measurable targets. An effective communication strategy will ensure that results, achievements and any difficulties or drawbacks are communicated effectively to key audiences.

All risks are further presented in the Country Programme Documents and in the risk matrixes. Risk which are considered likely to happen or which, in the event they did occur would have significant impact, will be monitored and reported jointly with the partner institutions. The steering committees in each country will consider the monitored risks and should recommend appropriate action implementable by programme partners. The Advisory Group composed by the MFA and the Danish Ministry of Climate, Energy and Utilities **(**MCEU) will also review risks as reported by the DEA and the RDEs as requested, and advice the DEA on appropriate mitigation actions.

3.3 Summary of country programmes

3.3.1 China country programme

There will be two Development Engagements in China. One Development Engagement is with Energy Research Institute (ERI) which is a the main provider of research and analysis as basis for political decision making on energy development in National Energy Agency and the National Development and Reform Commission (NDRC). The second Development Engagement is with MEE which a newly formed ministry responsible for a wide range of environment and climate agendas including carbon emission targets and revising the Chinese NDCs.

Enabling advanced energy system modelling with ERI

Through this engagement, DEA will support ERI in energy sector modelling to develop of ambitious short-, mid- and long-term low carbon energy strategies, targets, policies and plans. ERI will develop models of the complete energy system of China, demonstrating the socio-economic benefits of low carbon pathways at both national and provincial levels

Analyses will be presented and disseminated through annual publication of the Chinese Energy Outlook (CEO) which becomes the main tool used by stakeholders to evaluate, revise and raise ambitions of low carbon pathways and influences national policies towards more rapid decarbonization of the Chinese energy system and the setting of more ambitious NDC targets. The CEO will be supported by the publication of a Provincial Energy Outlook, which will highlight how a specific province can develop its policies in alignment with the national policies and targets. By 2025 the annual CEO will be recognized as one of the main bases for energy policy development, while the methodology for Provincial Energy Outlooks development will be widely recognized as the main tool for aligning national and provincial energy targets and ready to be replicated in other provinces. The policy recommendations of the CEO will contribute to the reform of the energy sector and power market in China whereby increased shares of renewable energy sources in the Chinese energy mix are expected.

Enhancing the capacity to align climate and energy policies of China with MEE

Within the MEE, the National Center for Climate Change Strategy and International Cooperation (NCSC) has leading role in addressing climate change and GHG emission reductions. DEA will support MEE, through NCSC and selected branches at provincial and city level, to increase capacity in analysing climate impacts and performing risk assessments of climate change in order to develop mitigation policies in the energy sector. Addressing the climate change mitigation potential in the energy sector is vital component for a successful development of low carbon pathways. It will allow the provinces and cities to avoid obsolete and unsuccessful approaches tried elsewhere, thereby reducing the costs of the green transition. Low costs will also strengthen the influence of the local Ecology and Environment Agencies under MEE to convince other authorities to support the low carbon transition. Cooperation between MEE and other national and international institutions on energy policy development and climate change mitigation, will be strengthened and best practices will be shared across national and provincial borders. As a result, MEE will be able to develop and implement at provincial level low carbon pathways which comply with the targets in the Paris Agreement and allow the setting and achievement of more ambitious NDCs.

3.3.2 Vietnam country programme

There will be three development engagements in Vietnam. All development engagements are in partnership with MOIT and will include a partnership with Electricity and Renewable Energy Authority (EREA) which is responsible for overall planning of the Vietnamese energy system, including planning and approval renewable energy, including off-shore wind. Second engagement is with Electricity Regulatory Authority of Vietnam (ERAV) which is the authority regulating the electricity activities and development of the power market, including framework conditions for renewable energy in the power grid. Third Development Engagement is with Energy Efficiency and Sustainable Development Department (EESD) which is responsible for managing and implementing at the national level the law of energy efficiency and conservation, which is the main legal basis for regulating the energy efficiency in industries.

Capacity Development for long-range energy sector planning with EREA

Through this engagement DEA will support EREA in capacity development for long-range energy sector planning. It will consolidate and extend the work undertaken by DEPP II which supported EREA in scenario development and development of the Energy Outlook Report (EOR), published for the first time in 2017 with the latest version issued in 2019. The new Development Engagement will use the biennial publication of the EOR to present energy system scenarios that show how with increasing shares of renewable energy, including offshore wind and energy efficient technologies are cost-effective alternatives to meeting the Vietnamese NDCs while ensuring national security of supply. This will be a key part of involving stakeholders, the general public and policy makers in a wider policy dialogues on energy sector planning. At the same time EREA will deepen its understanding of climate change drivers in the energy sector and concepts of externalities to be able to incorporate and address climate change as part of the quantitative energy system modelling. In parallel, the Development Engagement will assist authorities to lead and manage offshore wind development by helping prepare a

regulatory framework, technical standards and design an auctioning scheme for the roll-out of wind generating facilities. These outputs will enable EREA to lead the effort to evaluate, revise and influence national policies towards decarbonization of power production and adopting more ambitious NDC targets.

Capacity Development for Renewable Energy Integration into the Power System with ERAV

Through this engagement DEA will support ERAV in capacity development for renewable energy integration into the power system. It will consolidate and extend the work undertaken by DEPP II through which the Danish TSO supported the Vietnamese TSO in modelling and understanding the practical implementation of integrating renewable energy in the power grid. In DEPP III, through Energinet, Vietnam will get unique access to experts that can assist their national TSO in optimizing renewable energy integration. The assistance will include: promotion of greater flexibility in the power system, removing a constraint on the integration renewable energy and thus reducing the losses caused by "curtailment" (where energy from variable sources, such as wind and solar, cannot be used in the grid and is therefore wasted) which results in unnecessary release of CO_2 and significant loss of income for both government and private sector; development of a regulatory framework that will ensure the security and quality of power system operation and permit increased integration of variable renewable energy (VRE) into the network, including technical requirements for connection to, and use of, the grid (so-called "Grid Codes"); assistance in developing an open and competitive power market whereby market-based solutions for flexibility in power generation and demand-response are in place and enforced to optimise VRE integration; and, assistance to the Vietnamese power system operator in the design and application of forecasting and monitoring tools for optimal VRE integration.

The result will be that the share of VRE in the Vietnamese energy mix will be significantly increased. Losses of energy will be reduced and the security and predictability of the market and the access to the grid will encourage the private sector to invest more in renewable energy. The overall outcome will be a faster transition towards a low carbon energy system, lower GHG emissions, reduce pollution and greater national energy security.

Low carbon development in the industrial sector with EESD

Through this engagement DEA will support EESD in low carbon development in the industrial sector. It will consolidate and extend the work undertaken by DEPP II which helped to revise the Law on Energy Efficiency and Conservation (LEEC) of energy efficiency in industries at subnational level and pilot implementation in two provinces. The proposed Development Engagement will extend the implementation with the energy efficiency regulatory framework at national and provincial level. It will introduce incentive schemes to encourage compliance with the law and develop procedures, guidelines, tools and templates that guide industry on monitoring and reporting their energy use. Finally, it will

help produce technology catalogues and guidelines for at least two industrial sectors that will identify modern technologies for energy efficiency.

This three-pronged approach: regulation, incentivising compliance and providing technical support to comply, is expected to ensure that the Energy Efficiency law is operative in all provinces by 2025 and that the target of the law of 80% compliance by 2025, is met.

3.3.3 South Africa country programme

The DEPP III programme in South Africa will include three development engagements. The first Development Engagement is with the Department of Mineral Resources and Energy (DMRE) and Independent Power Producer Office (IPPO) who responsible for ensuring exploration, development, processing, utilisation and management of South Africa's energy sources. The second and third development engagements are with Electricity Supply Commission of South Africa (ESKOM) which is a state owned utility responsible for generation, transmission, and distribution and sales of electricity.

Capacity Development on Modelling and Procurement of Independent Power Production with DMRE and IPP Office

Through this engagement, DEA will develop capacity within DMRE and IPPO to assess and review external modelling and to enhance procedures for the tendering of independent power production.

The Development Engagement will gradually develop DMRE's capacity to apply modelling tools until they can assess and introduce low carbon pathways into South Africa's national energy system planning and policy development processes. In parallel, the Development Engagement will support IPPO in the areas of spatial planning, grid planning and connections, industry reform, market design and more effective auctioning processes thereby attracting further private investment in renewable energy supply. The Theory of Change is that together these organisations will create an enabling environment that attracts more investment into renewable energy production and boosts the share of affordable renewable energy in the South African system. As a result, renewable energy will be integrated into the grid meeting policy objectives of the Integrated Resource Plan (IRP) 2019, contributing to Just Transition of the power sector and allowing the adoption of more ambitious NDC targets.

Capacity Development within ESKOM on strategy and planning with ESKOM

The planned restructuring of ESKOM is for the legal separation of the utility into three companies - generation, transmission and distribution, in what the government has termed "divisionalisation".

Through this engagement, DEA will bring its experience and expertise from the transition of the Danish energy system and the setup of the NordPool market to help ESKOM become a modern utility with clear division of responsibilities. Grid planning and integration of VRE from transmission to distribution level will be strengthened so that the stochastic nature of VRE can be accommodated without compromising grid stability. A knowledge management platform will be established within ESKOM, sharing information to inform high level strategic decision making based on international experience and concrete approaches in a shift to market-based solutions. This will allow cost-effective measures of meeting the IRP 2019 through grid and strategic planning sharing knowledge across the institution and beyond and consequently provide an excellent source of inspiration for the establishment of an effective and transparent South African/Southern African power market.

Capacity Development for Renewable Energy Integration into the Power System with ESKOM

This engagement will develop ESKOM's capacity to integrate renewable into the power system through develop grid codes for increasing RE (renewable energy) penetration, changing load patterns for promoting efficient operation of the network; develop tools for forecasting, scheduling and dispatching VRE and ensure that these are applied; and, establish the basis for a liberalised ancillary service market, supported by regulation development and power system modelling in collaboration with relevant stakeholders.

ESKOM will be able to develop a regulatory framework, operational procedures and flexible options in the power system that support the transition towards a cost-effective security of supply with a rising share of electricity from VRE in South Africa. ESKOM will, through support to municipal power control centres, also be able to integrate new renewable energy capacity directly to the municipal grids.

As a result, in the five-year timeframe of DEPP III, flexibility of coal power plants will be increased and protocols will be in place to facilitate cost-efficient integration of thermal power production in the dispatch operation under conditions of high penetration of renewable energy generation. Stability issues caused by a larger share of variable renewable energy generation will be resolved and economic/market incentives, will be proposed, support the additional costs of the operational flexibility of thermal power plants. This will provide a platform for a shift to market-based solutions, as part of a just transition that integrates larger share of VRE into the grid.

3.3.4 Mexico

There will be three development engagements in Mexico. Partners to Development Engagement 1 are the Mexican Ministry of Environment and Natural Resources (SEMARNAT) – the nodal ministry for climate change matters - jointly with the National Institute of Ecology and Climate Change (INECC); the Mexican Ministry of Energy (SENER) jointly with its underlying agency, the National Commission

for Energy Efficiency (CONUEE), are the partners for the second development engagement; and SENER jointly with the National Energy Control Centre (CENACE), the Independent System Operator, are the partners for the third development engagement.

Modelling and development of climate change policies with SEMARNAT and INECC

This engagement will further develop the capacity of SEMARNAT and National Institute on Ecology and Climate Change (INECC) to identify, assess and communicate the sustainable development co-benefits in form of environmental, health and job creation related to cleaner energy supply and use. High-quality integrated scenarios developed with state-of-the-art tools for modelling the implications of these scenarios, will be produced with INECC and its capacity will be enhanced to independently prepare climate change mitigation modelling that integrates energy and transport and considers economic, social and environmental aspects of shifting away from fossil fuel based energy supply and less efficient use of energy. The results will be used to develop options for integration of climate change mitigation interventions into central federal government sector policies, strategies and plans including the National Climate Change Strategy update by SEMARNAT and associated sector roadmaps – which would represent an additional instrument by SEMARNAT compared with the present situation. A knowledge sharing and leaning platform by INECC for sub-national institutions, piloted in two states, will enable federal states to develop advanced and solid action plans on low carbon pathways, fulfilling their roles as defined in the General Law on Climate Change. The results will influence the NDC national review process and potentially lead to raising of the ambition level in NDC and national targets for 2030 and beyond, based on measures that are well coordinated and validated with all involved sectors and the subnational level.

Technical Cooperation on Efficient Use of Energy with SENER and CONUEE

This engagement will further develop the capacity SENER and CONUEE to promote the use of energy saving technologies in industry, to build the enabling framework for expansion of cogeneration and to advance data management and access to tools for informing policy choices on efficient use of energy. Furthermore, the outreach to federal state- and municipal levels to engage in energy efficiency planning will be strengthened. The aim is to assist Mexico to achieve goals of its recently published (i.e. Feb 2020) Transition Strategy to Promote the Use of Cleaner Technologies and Fuels in particular its national goal on annual reduction of energy intensity by 2%.

There will be four outputs. Firstly, the Voluntary Agreement scheme, introduced by CONUEE and supported by DEPP II, whereby industrial plants are assisted to reduce the energy intensity of their operations, will be strengthened and consolidated. Secondly, CONUEE will be assisted to develop targeted initiatives to promote deployment of cogeneration, where it contributes to GHG-emissions reductions. This will include preparation of a technology assessment catalogue, at least one feasibility study of a pilot project in a key sub-sector; and, strategic initiatives to stimulate investments in

cogeneration. Thirdly, support to at least two individual states in the Mexican federation on policy choices and implementation of energy efficiency at the sub-national level. Fourthly, support to CONUEE on the collection and analysis of aggregated energy demand and energy efficiency information, so that they can better assess the impact of various energy efficiency instruments and are, as a consequence, able to identify and evaluate new policy measures and technologies and their potential impact on future energy demand

Technological Cooperation in Power System Operations and Planning with CENACE

This engagement will further develop the capacity of CENACE to respond to increasing uncertainty and complexity in power system operation and planning, when the share of variable renewable energy (VRE) is increasing. This will encompass to further advance CENACE's short-term forecasting and planning systems with the aim to dispatch VRE efficiently while ensuring high reliability of the power system. In parallel it will also promote more rapid development of CENACE's methodologies and systems for long-term forecasting and planning in general, and studies of specific long-term trends, related to the increase in VRE, that will also impact the reliability of the power system. CENACE will thus be better able to meet the challenges of integrating VRE. The targeted share of clean energy in the power supply will be met while maintain or improving quality of supply and curtailment of VRE will be kept at low level. As a result, ongoing and future contributions to reduce Mexico's GHG emissions derived from system operations and planning, will increase. These will be quantified and published so that a systematic analysis of CENACE's contributions and strategies to achieve GHG-emissions reductions is available to policy makers and Mexico will be better positioned to achieve or even pass the clean energy targets in the Energy Transition Law and the GHG-emissions reduction targets in the General Law on Climate Change.

3.4 DEPP III's contributions to sustainable development

3.5 Contributions to SDGs

DEPP III addresses SDG 7 on *Ensure access to affordable, reliable, sustainable and modern energy for all* by helping the partner countries to expand renewable energy and reduce energy intensity of their economies. More renewable energy in the power mix will have a positive impact on the renewable energy share in total final energy consumption which is the indicator (7.2.1) used globally to measure the sub-goal *By 2030, increase substantially the share of renewable energy in the global energy mix* (sub-goal 7.2). Moreover, DEPP III helps partner countries to reduce the energy intensity of the economy through more efficient power systems (with less curtailment of variable energy resources like solar and wind and with less losses in conventional units through increased flexibility of thermal power units) and through efficiency improvements in end-use sectors (particular in industrial sectors in Vietnam and Mexico). Reduced energy intensity measured in terms of primary energy and GDP is the indicator (7.3.1) used globally to measure progress of the sub-goal on *By 2030, double the global rate of improvement in energy efficiency (sub-goal 7.3).*

DEPP III will support SDG 13 - *Take urgent action to combat climate change and its impacts* – by supporting partner's in formulating strategies, plans or initiatives for low carbon development into national policies. This is directly aligned with sub-target 13.2 and indicator 13.2.1. In support of SDG target 13.3 *Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning*, DEPP III will support human and institutional capacity development on climate change mitigation as a key feature across the programme.

DEPP III will primarily support SDG 7 and 13, however, the programme will also contribute to SDG 8, 9 and 17.

DEPP III will contribute to SDG target 8.2: *Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors* by supporting partner countries in sustainable economic growth and high level of economic productivity as part of low carbon development. Furthermore, SDG target 8.4 on resource efficiency will be supported by the Development Engagement addressing energy efficiency in Vietnam and Mexico.

Similarly, the programme will contribute to SDG 9 - *Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation* with a focus on SDG target 9.4 as DEPP III will support the further development of renewable energy as part of a greater adaption of clean and environmentally sound technologies.

Finally, contributions to the SDG 17 - *Strengthen the means of implementation and revitalize the global partnership for sustainable development* and in particular SDG 17.6 as part of the North-South and potentially South-South cooperation on technologies, innovation and knowledge sharing in support of renewable energy and energy efficiency.

3.6 Sustainable development co-benefits

In addition to climate change mitigation, DEPP III will contribute to the partner countries sustainable development through the co-benefits associated with the low carbon solutions pursed in relation to health, environment and job creation. Environmental and health related co-benefits from transition to low carbon technologies would tend to benefit marginalized groups and the poorest part of the population most and thus have a positive impact on sustainable development in the partner countries. The programme will pay due attention to Just Transition aspects – pertinent in South Africa in particular- in order to support that co-benefits in terms of income- and job creation associated with low carbon transition at the best contribute to inclusive, economic and green growth. More cost efficient and sustainable energy systems – in supply and demand – additionally offers opportunities for increased

productivity of the economy and through this for better opportunities for private and public sector to promote poverty reduction.

3.6.1 South Africa

In South Africa the necessary energy system transformation poses major social challenges as more than 120,000 jobs depend directly or indirectly on coal mining, further aggravated by poverty, inequality and unemployment. Just Transition is a fundamental driver for change in South Africa to support the energy system transformations happens in a fair and inclusive manner leaving no one behind. As a guiding principle, Just Transition can support the most vulnerable citizens, companies and national/regional authorities in the transition from fossils fuels to renewable energy. Just Transition across various sectors is a prerequisite for green transition in South Africa and it requires proper planning and government intervention. DEPP III in South Africa will have Just Transition as an integrated part of Development Engagement 2 - Capacity Development within ESKOM on strategy and planning. The Development Engagement will support Corporate Strategy in ESKOM on high level decision making for market-based solutions with clear requirements for just transition of the energy sector, including the private sector, and job creation.

Co-benefits from the programme in South Africa include improved environment and health aspects due to substitution of coal with renewable energy which will reduce the level of damaging fine particles (PM2.5) from coal based power plants. Improved environment and health aspects will benefit the poorest part of the population as these groups most as have less opportunities to afford health costs and typically live in areas near the coal based power plants. As a result, environmental and health co-benefits will contribute to socio-economic development in South Africa.

3.6.2 Vietnam

Air pollution in the larger cities poses significant health risks in Vietnam. Data from the WHO state that more than 60,000 deaths in Vietnam are linked to air pollution. In 2016, the mean values of fine particle concentration (PM2.5), which is considered one of the most dangerous forms of pollution, were almost five times higher in Hanoi than the values recommended by WHO. The close link between energy generation and air pollution makes this an area of high relevance for energy system planning under DEPP III.

As a prioritized initiative for sustainable development, the renewable energy outlook reports under Development Engagement 1 - *Capacity Development for long-range energy sector planning* - will have a dedicated focus on pollution costs and other externalities of fossil fuels. As part of the development engagement, a thorough study and methodology to estimate health costs related to fossil fuels will be delivered. The study will assess externalities such increased health expense, reduced quality of life, reduced life expectancy and other factors related to fossil fuels. Similarly, a separate study on job

creation in relation on low carbon development will be performed. Job creation as well as externality costs on air pollution and health will be incorporated in the optimization process of the energy models whereby a more holistic and cross cutting assessments of fossil fuels and renewable energy can be produced.

Development Engagement 3 - *Low carbon development in the industrial sector* - will have co-benefits in form reduced local air pollution from the industrial sites as well as generation of green jobs at the industrial parks.

3.6.3 China

Air pollution in urban areas and the significant impact in population health has been one of the major concerns in China in the recent years. As part of Development Engagement 1 - *Enabling advanced energy system modelling with NDRC's Energy Research Institute* - DEPP III will provide realisable and cost efficient pathways towards high shares of renewable energy. As a selected and dedicated focus on sustainable development, the China Energy Outlook will have a special emphasis on analysing the balance between the existing coal economy and the development of a new green energy industry, to ensure that socioeconomic development (triggered improved environment and health) and Just Transition are used as guiding principles of the proposed energy transition.

In addition, the analytical and data-based nature of the work done to create the outlook reports at national and regional level provides steps towards increased transparency of decision making processes. The quantitative assessments provide a measurable set of arguments and traceability in terms of data and results, all of which support the development of good governance practices as a co-benefit of the outlooks reports.

3.6.4 Mexico

Air pollutants, and not least particulate matter emissions have major health impacts in Mexico, not only in urbanized areas heavily affected by transport, industrial and energy industrial activities, but also from burning of biomass in agricultural and food-processing activities, and in the residential sector from use of woodstoves. Black Carbon emissions is for instance accordingly already paid much attention in national climate change programmes alongside GHG-emissions, and it is a priority for SEMARNAT and INECC – partners to the DEPP III - to advance their capabilities in identifying the most cost-effective low carbon pathways considering economic, environmental and social costs and benefits. DEPP III will assist in this through provision of high-quality integrated scenarios and the use of state-of-the-art tools for modelling including to the extent possible, costing of co-benefits associated with the climate change mitigation pathways.

Programme activities under the Development Engagement with SENER and CONUEE on efficient use of energy, will – if successful – have a positive impact on reducing the energy intensity of the economy A higher degree of energy efficiency in industrial sectors will contribute to lower energy costs and a more cost competitive industrial sector. A better performing industrial sector would potentially contribute to socio-economic development and job creation in Mexico. Opportunities in the building sector lies in avoiding to lock-in high energy demands for the Mexican economy for many decades ahead by not utilising the opportunities for constructing new buildings to standards that comes with the lowest costs to the society over the lifetime of the building. By contributing to these opportunities, the programme could attribute to socio-economic development in terms of e.g: increase access to housing with affordable energy services and affordable, comfortable indoor climate; job creation in sustainable building design and construction; creation of new jobs in industries and public sector that invests energy costs savings in increased production capacities.

3.7 Approach to capacity development

As part of the formulation of DEPP III, DEA conducted a "targeted assessment" to examine the capacity development approaches used in the previous DEPP cooperation and to find ways to identify opportunities to further strengthening and consolidating aspects which have contributed to the successes so far. The recommendations of the assessment have influenced DEPP III including the theory of change, the formulation of the development engagements, the use of LTAs; the results framework, the targets and indicators; the implementation manual and the reporting. The main areas where there have been changes and strengthening of emphasis are explained in the assessment document and guidance on how to implement these changes will be included in the DEPP III implementation manual (a manual descripting all operational aspects and procedures of DEPP III). Key features may be summarised as follows.

The DEPP III approach to capacity development is founded upon the widely used OECD/DAC definition[4]:

"capacity is the ability of people, organisations and society as a whole to manage their affairs successfully and capacity development is the process whereby people, organisations and society as a whole strengthen, create, adapt, unleash and maintain capacity over time."

As a result of Denmark's response to the energy crises of the last century, and its early adoption of a green energy agenda, DEA has acquired deep practical experience in addressing the challenges of low carbon energy transition. The DEPP programmes make this experience available to carefully selected

[4] OECD, 2006: DAC Guidelines and Reference Series. Good Practice Guidance for Development Co-operation, OECD, Paris.

partner countries which are now addressing those same challenges and are at a stage in the development and implementation of their own energy strategies where they can learn from the Danish experience. In all four partner countries, DEPP I and DEPP II have promoted major adjustments to management of the energy sectors which are on track to have long-term impacts of potentially global significance. It is imperative to retain the key elements of capacity development that have been central to this success and integrate them into DEPP III. At the same time, the formulation of DEPP III and the shift to a longer programme time, presents an opportunity to learn lessons from internal and external reviews of aspects of capacity development in DEPP II to make DEPP III more effective and sustainable and to make the experiences capacity development used in DEPP III available to others for analysis, learning and replication.

Key elements of the approach for capacity development include the following:

- A GtG modality with exchange of experience and adjusting to local challenges and contexts.
- A focus on key areas where DEA has extensive competences and a comparative advantage over most, if not all, other leading energy authorities.
- Selection of suitable national partners that embrace the GtG modality, have a significant energy sector that is developing and are at the forefront of massive investments in the energy sector where they can benefit from Danish experience, and have a national commitment to reducing GHG emissions as part of the Paris Agreement.
- Peer-to peer cooperation between institutions through which, as the cooperation progresses, the partners take greater responsibility for outputs with the aim being that the partners can produce and replicate the outputs on their own.
- The placement of LTAs in key partner institutions to provide on-going technical support as well as to coordinate the support across the country programme and to acquire the information and insights necessary to design and implement effective capacity development interventions
- Establishment of an enduring institutional capacity is designed into programme objectives so that at the conclusion of an intervention the partner institution retains the ability to initiate and manage the newly developed procedures, methodologies and analytical approach without external support.
- Relevance and technical quality of support so that technical advisors draw upon the full expertise of the DEA and external expertise, as necessary.
- Flexibility and demand responsiveness, within the framework of progress towards the agreed objectives, to the immediate needs of the partner as part of the peer-to-peer approach.
- High level policy dialogue with senior policymakers to help transform the enabling environment for capacity development and to build the political support for the policy and strategic changes.

DEPP III will, in its capacity development approach, make use of the following:

<u>Preserve and Reinforce the Successful Elements of Capacity Development:</u> The focus on transfer of knowledge will continue in DEPP III under the GtG modality. The successful tools and techniques adopted in DEPP II will be continued with an aim to strengthen the capacity of individuals and partner institutions to accommodate the partner's priorities for low carbon development. Tools and techniques

include peer-to-peer exchange with partner institutions; twinning of national and Danish specialists; expert-to-expert on the job training; training courses; lectures from invited specialists; seminars that might include a wider range of stakeholders; joint provision of technical information, analytical studies, manuals and guidance; and, exposure of partners to new approaches through study tours and field visits. All tools and techniques will be contextualized to the partners needs and will cater for a wider institutionalization of the approach for capacity development.

The DEPP II has been successful in providing capacity development of partners as part of the long-term energy modelling and planning where of a series of technical studies serve as stepping stones for a final energy outlook report which contains a number of policy recommendations for achieving partners' national energy and climate targets. The underlying technical studies include technology catalogues, fuel price projections; analyses of the grid capacity, etc. are fully anchored within the institution and serve as methodology and reference for future energy outlooks or other similar assessments. The approach shows how technical studies owned by the partner institutions serve as building blocks for final synthesis in the form of an outlooks report with evidence based policy recommendations. DEPP III will seek a similar approach of other thematic areas in addition to long-term energy planning.

More emphasis will be placed on techniques that may become more valuable in DEPP III including: Explore options for partner institutions to adopt and apply provided relevant tools or content as part of their internal procedures in order to promote self-driven capacity development within the institution. Also, tools and content for capacity development will to the extent possible be scalable and replicable whereby partner institutions can use it outside DEPP III.

Additionally, DEPP III will include more emphasis on policy dialogue aimed at reinforcing the enabling environment for transformation; awareness raising aimed at further policy outreach; knowledge management which ensures that learning, change and development are retained when staff move; research could be developed without much cost to the programme by networking with universities to contribute to dissemination of good practice and amplify the overall effectiveness of the programme; and, organisational strengthening where necessary to remove barriers to reform, and acceptable to the partner.

Formulation of Capacity Development Activities: Capacity Development activities will be formulated as part of the Terms of Reference (ToR) for each medium to long-term activity in direct collaboration with partners. ToRs will include particular attention to documenting the needs of the partner, clearly setting out the scope and objectives of the capacity development activities and reaffirming that indicators, set out in the DEDs capture the capacity development aspect and are SMART.

Sustainability of Institutional Capacity: Establishment of an enduring institutional capacity is designed into programme objectives and targets. The necessity of institutional development and the ways in which this can be assured will also be incorporated into implementation manuals, LTA ToRs, consultant ToRs, monitoring systems and dialogues during the Steering Committee meetings.

Reinforcement of Reporting, Monitoring, and Evaluation: Capacity development interventions will be monitored against indicators as defined the DEDs. Applied indicators will ensure progress and internal quality control towards the objectives of these interventions. The MTR of DEPP III will assess the long-term sustainability of capacity within institutions and guide any required adjustments within the programme.

Applied ToRs for individual assignments under DEPP III will include Specific, Measurable, Achievable, Relevant and Time-Bound (SMART) indicators addressing capacity development. As part of the implementation manual, a set of genetic indicators for measuring capacity development of partner institutions and staff, as well as evaluation templates for training courses, will be developed as standard reporting, monitoring and evaluation. These genetic indicators and templates will be applied in all ToRs and underlying activities of DEPP III. Using the indicators for capacity development, the collected values from each activity will be applied to underpin the overall progress towards expected outputs and outcomes in combination with measuring the quality of DEPP III's capacity development activities. As part of the implementation manual, aggregation of collected values for capacity activities will be possible across activities, development engagements and countries.

A narrative reporting on capacity development within each development engagement will be part of the reporting to the Advisory Group as part of standard reporting format. In addition, the DEPP III will explore options for reporting on capacity development as separate topic to the Steering Committees. The likely reactions of each national partner to receiving a separate section reporting on capacity development activities and impacts will be assessed by the Danish Embassy and DEA. The decision on whether to present this information to the Steering Committees will be determined on a case-by-case basis.

Use a Greater Range of Technical Assistance Delivery Mechanisms: The 5-year duration of DEPP III may give rise to opportunities to use techniques such as exposure events and the promotion of research to supplement core activities and to extend the influence and sustainability of the programme.

Use of External Consultants for replicating Tasks: DEPP III, with its greater emphasis on roll-out to the regions may need to make greater use of training courses. These may be delivered by the DEA staff, by external agencies, or a train-the-trainers approach may be adopted. External consultants will, in addition to specific technical inputs, be considered for replicating tasks that do not require DEA specialist expertise

Dissemination, Awareness Raising, and Lesson Learning: There will be more dissemination and awareness raising in DEPP III to spread good practice, by facilitating awareness raising events and by providing access to information for development of academic papers, research, etc. Enhanced dissemination and awareness raising will be delivered as part of the core activities as described in the development engagement, the communication plan of DEPP III as well as via SEC. The custom of developing "good practice" or "impact papers" will be continued with dissemination through the DEA strategic communications focal point.

3.8 Work planning, monitoring and reporting

3.8.1 Work Planning and operation

DEPP III work planning is an iterative process with each development engagement partner, where the annual work programme will be developed to match partners' annual work programmes and needs, and availability of DEA specialists and consultants, balanced with available budget. The annual work plan in each country will defined annual activities, annual output targets and link these directly to the Result Framework. In collaboration with partners, ToRs will be formulated for each activity and the ToRs will specify tasks and targets for the activity as well as required specialist inputs from partners, DEA, LTA, Energy Sector Counsellors, Energinet and consultants.

All international consultants are procured via a framework contract with a consortium of relevant consultant companies covering a broad scope of expertise. National consultants are procured as a sub-contractor to the consortium or directly by the Danish embassies. In cases where the partner has a specific need for support in line with the strategic objective of DEPP III which cannot be accommodated by DEA, LTAs, Energy Sector Counsellors, Energinet or consortium of consultants, the DEA will ask the consortium to sub-contract the relevant expertise.

Each detailed output will have SMART indicators developed. The work plans will be developed with the following in mind:

- Partners' work programmes, institutional needs and targets
- Identify delivery options that match needs, making use of existing options where possible
- Articulate how level of ambitions in tasks matches resources available
- Focus on value-for-money with partners – getting the highest impact with the fewest resources

- Plan and prioritize resources across the engagement to make sure they can be focused in the right areas
- Identify options for cooperation when high level climate diplomacy opportunities emerge
- Ensure that capacity development is properly defined and integrated into all activities.

The Implementation Manual of DEPP III will developed based on previous standard operational procedures (from DEPP II) and will include:

- All assignments with partners and SEC partners have Terms of Reference (TOR)
- Each mission carried out by DEA specialist or consultants will be carried out based on specific and detailed TORs
- Each mission is concluded with a back to office reports
- Quality assurance will be carried out on all activities and draft deliverables to ensure that these contribute to the defined output and impact
- Weekly team meetings within country team, that also include LTAs and Sector Counsellors, to discuss country specific matters
- Weekly meeting for all country team leaders to discuss cross cutting items
- "Technical thematic groups" with participation from other DEA units to discuss the latest development within certain thematic areas.
- Coordination with Danish Ministry of Climate, Energy and Utilities (MCEU) and MFA on items related to policy, diplomacy and strategic involvement by Denmark

3.8.2 Monitoring and reporting

Following Danida Aid Management Guidelines (AMG), monitoring and reporting will be based on the results framework at output and outcome level and each development engagement partner will, jointly with DEA monitor progress toward achieving these outputs and outcomes via annual progress reporting to the Steering Committees[5]. An Annual Progress Report will be prepared for approval by the Steering Committee and submitted to the Advisory Group in Copenhagen. All data collection should, to the extent possible and when relevant, be disaggregated by gender, area, sector, etc. and consolidated per country and forwarded to the DEPP III Advisory Group in Copenhagen, which guides the overall DEPP III implementation.

Detailed indicators for each specific development engagement output may be refined during the first quarter of implementation, where also annual targets, in line with already defined targets, will be adjusted with reference to the guidelines for monitoring of the Danish Climate Envelope. Also, when mobilising unallocated funds, either for core partners or SEC partners, then specific indicators will be defined and will follow the monitoring and reporting program for DEPP III.

[5] Reporting to the steering Committee will be done bi-annually in Vietnam.

Monitoring towards targets will be reported through the bi-annual progress reporting to the Advisory Group using a "traffic-light" system, where:

- "green" is on-track – implementation progresses as scheduled
- "yellow" is partly on-track, which needs an explanation by development engagement partner including actions taken to get back on-track
- "red" is off-track, which needs a detailed explanation by development engagement partner to the Steering Committee with recommendations of changes to the implementation to get the engagement back on-track. If "red" in two consecutive reporting periods, the Steering Committee may consider extraordinary mitigation measures such as allocation of a task force and reallocation between the development engagements or abandonment of activities as deemed relevant.

Monitoring of actual budget spent by DEA as well as international and national consultancy will be reported in the consolidated annual progress reports across all four countries by DEA.

A MTR of DEPP III will be conducted by the MFA. Prior to the MTR, the DEA will prepare an exit strategy for each country which will be assessed by the MTR. In addition to the MTR, MFA has the right to carry out any technical mission that is considered necessary to monitor the implementation of the programme. After the termination of the programme support the MFA reserves the right to carry out evaluation.

4. Management set-up

The DEPP III Advisory Group is established in Copenhagen as the highest authority of DEPP III to oversee implementation of the programme in all four countries and is a continuation from DEPP II. The Advisory Group will consist of representations from MFA and MCEU. DEA will act as secretary to the Advisory Group. The Advisory Group will meet on a bi-annually basis, or when required, to discuss programme progress and solicit cross-programme countries experience and to discuss opportunities from learning across partners. The Advisory Group will be responsible for decisions to mobilise unallocated programme funds, including SEC, if and when an opportunity within one of the partner countries occurs, based on a set of criteria. This may be an opportunity within an existing development engagement or as a strategic initiative or intervention not foreseen during programme preparation. The Advisory Group will also advise EDKs on strategic actions to be pursued in policy dialogues on the energy and climate change agenda in the countries.

Country Steering Committees will be established in each partner country. The Steering Committees will be co-chaired between partner country representatives and the Danish Ambassador in the country. In Vietnam, South Africa and Mexico the co-chairs of the Steering Committees will be at the level of Vice-Minister. In China each engagement will have their own Steering Committee co-chaired by the head of the engagement institution and a representative from DEA.

Steering committee members would, in all four countries, include representatives from each engagement partner; other relevant authorities and DEA. The Steering Committees will meet as a minimum once per year to approve annual work plans and the Annual Partnership Country Programme progress report and will discuss and resolve issues related to programme progress and decide on any reallocation of resources between development engagements and is a forum for policy dialogue. Each Steering Committee annual meeting would have presentation of a current relevant theme on energy or climate policy that can inform and prompt a policy dialogue between Denmark and the respective partner country.

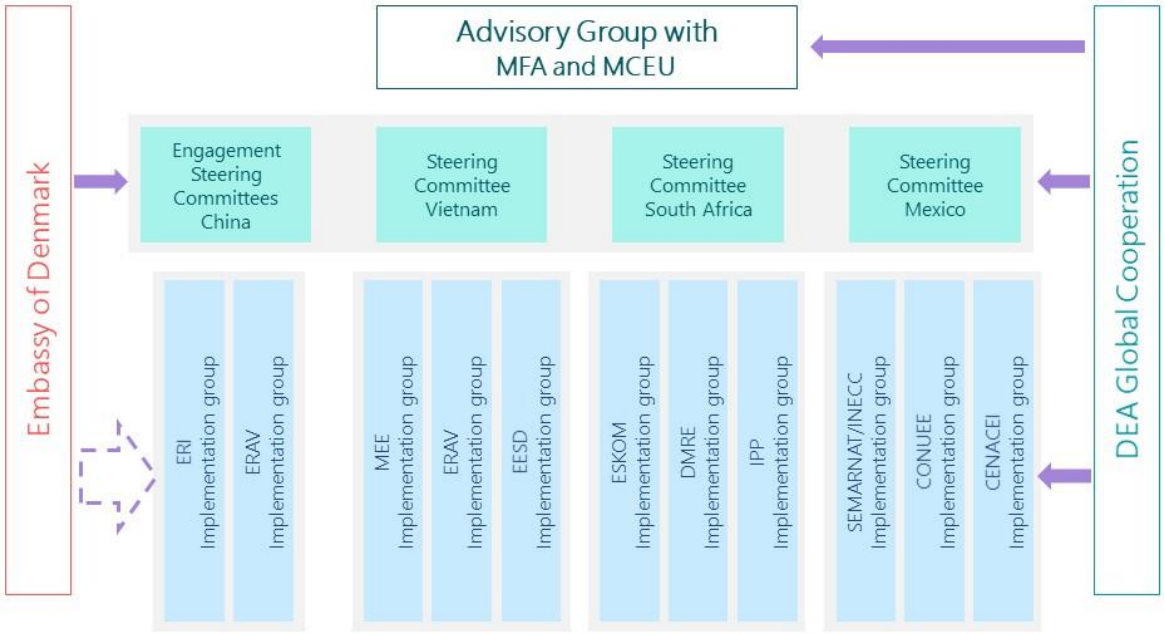


Figure 2: Management structure of DEPP III

DEA's Global Cooperation has appointed Country Team leaders as focal point for each partner country, responsible for overseeing programme implementation. At country level the daily implementation of the programme is the responsibility of engagement partners in joint cooperation with DEA and advised by the LTAs.

An Implementation Group is established for each development engagement, and in engagements where more institutions are involved several implementation groups may be established. The Implementation Groups are established to coordinate and manage daily implementation of the annual work programmes. Each Partner institutions appoints members to the Implementation Group where the DEA and LTA also participate and with involvement of the Energy Sector Counsellor. The Implementation Group will guide daily implementation of the engagement. The Implementation Group will meet at least twice per year and have the responsibility to: i) develop, consolidate and check annual work-plans and budgets against development engagement partners work-plans; ii) monitor

programme progress at output level, using "traffic light" markers for assessment of progress of activities against agreed work plans, and; iii) ensure cross fertilisation within and between engagements and iv) identify strategic interventions that may require attention supported by unallocated funds. The Implementation Groups report on development engagements to the Steering Committee.

DEA will be the implementing partner from Danish side to facilitate the GtG cooperation under DEPP III. The costing of a DEA man-year follows the guidelines provided by the Agency for Public Finance and Management part of the Ministry of Finance. Compared to previous phases of DEPP, a similar staffing ratio is applied in DEPP III to cater the GtG programme. In line with the guidelines from Agency for Public Finance, the costing of a DEA man-year is increased during DEPP III which has resulted in a relative budget increase for DEA staffing.

Summary of Plan for Communication of Results

To raise awareness of the urgent need to initiate climate change mitigation actions, communication is a critical new element of the DEPP III programme. As part of the DEPP III, DEA will actively engage in informing stakeholders of progress and findings both in Denmark and in the partner countries. In Denmark, the target is to communicate the value and effect of the Danish international engagement under DEPP III as part of the Danish Climate Act. The communication will focus on selected thematic results and each development engagement will include a dedicated plan for publication of "results stories". Focus for the communication in Denmark will be to communicate the positive value and effects of DEPP III to decision makers, opinion leaders, media and the general public, through a variety of means, including social media and formal research media. All relevant information will be made public on the DEA website.

In the partner countries, the focus will be on raising awareness on the opportunities and choices going towards a greener energy system and how DEPP III contributes to this. The ambition is to increase the impact of the programme and ensure a continuing high demand for low carbon development in the partner countries. Communication strategies will be prepared and implemented in each country, ensuring that the communication initiatives focus at relevant levels and in a timely manner. This include targeted high-level policy dialogue and broader public information in the partner countries.

The communication of key strategic messages will be cross-cutting in every communication activity, including in media interviews, tweets, LinkedIn communication, press releases and speeches, but also at workshops and seminars addressing practitioners and stakeholders. They form part of the foundation of the knowledge sharing that the programme fosters in the partner countries to achieve low carbon emission from energy generation and consumption.

Where results from research papers emerging from DEPP III activities that may have a broader interest than academia, the results will be translated into information pieces for wider dissemination and made available online.

5. Budget and financial management

5.1 Overall DEPP III budget

		DKK million
China		**53.058**
	Support to ERI	35.324
	Support to MEE	7.467
	Long-Term Advisors	10.267
Vietnam		**60.291**
	Support to EREA	18.591
	Support to ERAV	14.150
	Support to EESS	13.550
	Long-Term Advisors	14.000
South Africa		**39.187**
	Support to DMRE and IPPO	8.047
	Support for ESKOM (strategy and planning)	11.265
	Support for ESKOM (system operations)	12.875
	Long-Term Advisor	7.000
Mexico		**53.057**
	Support to SEMARNAT/INECC	21.237
	Support to CONUEE	12.579
	Support to CENACE	6.875

Long-Term Advisors	12.366	
DEPP III level		**44.406**
DEPP III Programme Management [6]	11.180	
Monitoring and Mid-Term Review	2.000	
Unallocated funds:	30.760	
Unallocated funds with DEPP III partners: (16.226 DKK million)		
Unallocated funds for Strategic Engagement and Cooperation with complementary partners (15.000 DKK million)		
GRAND TOTAL		**250.000**

Unallocated funds for DEPP III consist at total of [12%] of the total DEPP III budget and can be mobilized by the following overall guiding principles:

- Partners in the partner countries [can apply] for support to interventions beyond their approved results framework, when an unforeseeable and strategic opportunity arises during program implementation.
- To strengthen participation in dialogues and exchanges of insights around the low carbon energy development agenda through cooperation with stakeholders, outside the core circle of existing partners as part of the SEC.

Processes and criteria for approving unallocated funds will be defined in the implementation manual of DEPP III. Unallocated funds can be mobilised until one year before completion of the programme, to ensure completion of activities.

[6] Task under DEPP III programme management include: Tender and management of framework contract; contract managment of local consultants; financial controlling of DEPP III budgets and expenditures; preparation and follow-up on Advisory Group meetings; management of application of unallocated funds; knowledge sharing and lesson learned among DEPP III countries and wider anchoring within DEA.

5.2 Financial management

Funds are made available by the Climate Envelope within MFA and will be transferred to the DEA Global Cooperation Department, who will be responsible for all financial management of funds for DEPP III. The Financial management procedures are those laid down by the Danish Government for management of funds and Danida guidelines. Since there will be no cash transferred or disbursement of funds directly to the development engagement partner, there are no requirements for accounting of funds and financial reporting at development engagement level.

However, based on the agreed annual work plan, the international and national consultancy inputs will be budgeted in terms of days delivered in country and agreed between DEA and the engagement partners. The annual progress reports will include the actual time spent and cost for each technical assistance in order to monitor the use of budget for technical assistance.

International consultants will be identified through one or more international framework contracts with at least three consultant companies. The framework contracts will be tendered for by DEA and follow Danish procurement rules. International consultant inputs will be drawn from the pool of consultants in the framework contract, based on tasks at hand. Final selection of agreed international external consultants (in any form) will be done in a process with the Implementation Group and will be approved based on no objection from either side. Procurement of agreed national specialist Technical Assistance (TA) will follow Danida procurement procedures for local consultants.

Recruitment of the LTA follows procedures of the Danish Ministry of Foreign Affairs and is supported by DEA. Representatives from the partner institution where the LTA will be placed participate in of the recruitment panel together with representatives from DEA and EDK.

Financing and recruitment of Energy Sector Counsellors is done outside the DEPP III and hence, not financially managed within this programme.

The partner must provide the necessary staff resources as an in-kind contribution and as far as possible also cover travel expenses and per diem during study tours. Where budget-constraints make this impossible, the project may finance costs related to study tours.

DEPP III will pay for any other logistical arrangements in relation to study tours or international training arrangements. Workshops and seminars in-country will be paid for by DEPP III. Any sitting

allowance, travel and subsistence allowance required for any workshop or meetings will be paid for out of partners' own budgets, where required.

5.3 Summary of anti-corruption measures

DEPP III has no fund transfer to partner countries and hence, anti-corruption measures in the partner countries are focused on the process of tendering, award, or execution of contracts with local consultants. In this regard attention is given to detecting that no offer, payment, consideration or benefit of any kind, which could be regarded as an illegal or corrupt practice, are made, promised, sought or accepted - neither directly nor indirectly - as an inducement or reward in relation to activities funded under DEPP III in the partner countries, Any such practice will be grounds for the immediate cancellation of the engagement or parts of it, and for such additional action, civil and/or criminal, as may be appropriate. Similarly, the same measures shall be exercised towards DEA in any tendering, award, or execution of contracts with local and international consultants.

ANNEXES

1) Annex 1: Country Programme Documents
2) Annex 2: list of supplementary material
3) Annex 3: Plan for communication
4) Annex 4: Follow-up on recommendations from DEPP II mid-term review and Danida Programme Committee
5) Annex 5: Management and Implementation Procedure of SEC
6) Annex 6: Process Action Plan
7) Annex 7: Signed table of Appraisal

Annex 2. Vietnam and South Africa country project documents

Danish Ministry of Foreign Affairs of Denmark (MFA) **DANIDA**

Danish Ministry of Climate, Energy and Utilities (MCEU)

Country Programme Document

Danish Energy Partnership Programme III with South Africa

2020 – 2025

Final

17 august 2020

Table of contents

Abbreviations

DEA – Danish Energy Agency

DEPP – Danish Energy Partnership Programme (China, Mexico, South Africa, and Vietnam)

DED – Development Engagement Document

DoE – Department of Energy

DKK – Danish Kroner

DMRE – Department of Mineral Resources and Energy

DTU – Technical University of Denmark

EE – Energy Efficiency

GCF – Green Climate Fund

GDP – Gross Domestic Product

GHG – Greenhouse Gas

GtG – Government to Government

GIZ – Deutsche Gesellschaft für Internationale Zusammenarbeit

IEA – International Energy Agency

IPP – Independent Power Producers

IPPO – Independent Power Producers Office

IRENA – International Renewable Energy Agency

IRP – Integrated Resource Plan

LTA – Long-Term Advisor

MCEU – Danish Ministry of Climate, Energy and Utilities

MFA – Ministry of Foreign Affairs of Denmark

MTR – Mid-Term Review

NCCRP – National Climate Change Response Policy

NDC – Nationally Determined Contribution

NDP – National Development Plan

OECD-DAC – Organisation for Economic Co-operation and Development -- Development Assistance Committee

PV – Photovoltaic

RDE – Royal Danish Embassy

REIPPPP – Renewable Energy Independent Power Producer Procurement Programme

SALGA – South African Local Government Association

SANEDI – South African National Energy Development Institute

SDG – Sustainable Development Goal

SMART - Specific, Measurable, Attainable, Realistic and Timely

SSC – Strategic Sector Cooperation

TA –Technical Assistance

ToC – Theory of Change

ToR – Terms of Reference

TSO – Transmission System operator

UNFCCC - United Nations Framework Convention of Climate Change

1 Introduction

South Africa has a population of around 57.8 million and has the 2nd largest economy in Africa (after Nigeria) with a GDP of USD 6,374 per capita and an annual growth rate of 1.3% in 2019.

South Africa was denoted as the 16th largest emitter of CO_2 in the world by World Resource Institutes Climate Data Explorer. The government acknowledges this and in its National Climate Change Response Strategy, notes that it has significant GHG emissions (almost 4 times the world per capita average) from its energy intensive, fossil-fuel powered economy. South Africa's National Development Plan envisages that, by 2030, South Africa will have an energy sector that provides a reliable and efficient energy service at competitive rates, that is socially equitable through expanded access to energy at affordable tariffs and that is environmentally sustainable through reduced pollution. Following the stated national policy South Africa intends to invest heavily in transforming its energy sector to low carbon, including substantial investments in renewable energy.

In its Nationally Determined Contribution (NDC) to the Paris Agreement, South Africa has committed to a peak in greenhouse gas emissions between 2020 and 2025 at a level between 398 and 614 Mt CO_2-equivalents. The effective implementation depends on the availability of financial resources, development and transfer of technology and capacity building.

Denmark is uniquely positioned to assist South Africa to achieve these goals and even to increase the level of ambition. The Danish energy model is based on 40 years of transition and ambitious policy targets on renewable energy and a proven, flexible energy system. Denmark has demonstrated that it is possible to combine economic growth with a parallel reduction of GHG emissions and energy consumption. As a result, the Danish energy system has been adjudged as one of the best in the world and the recent in-depth review of the Danish system by the IEA confirmed that Denmark has managed to green the energy system cost-effectively while maintaining a reliable energy supply.

Since 2012 the Danish Energy Agency (DEA) has been offering support to partner countries with the objective to learn from the Danish low carbon transition of the energy system. DEA now has a dedicated department for international activities from where it now manages partnerships with 16 countries. The energy and climate cooperation with China, Mexico, South Africa and Vietnam was grouped into the Danish Energy Partnership Programme (DEPP) in 2012. The four countries are emerging economies and important players in the global energy landscape, representing almost one third of GHG emissions. Each of the countries had forecasted significant increases in energy consumption, and were facing key, strategic energy-related choices that would determine their energy future for decades to come. All countries have presented strategies and policies to reach ambitious climate and energy targets.

Prior to DEPP II, DEA shared Danish experiences with China, Vietnam, South Africa and Mexico as contributions to separate bilateral programmes. The government-to-government (GtG) modality was further introduced, consolidated and improved under DEPP II. The GtG modality involves DEA as the primary driver for implementing a programme that is structured around sharing of long-established Danish expertise and knowledge and development of technical, legal and policy instruments in close collaboration with partners.

The refined GtG modality now features: a Programme Support Agreement outlining shared government goals for the cooperation; provision of technical advisory support offering counterparts wider access to Danish experience, expertise and technology solutions; continuous in-country presence through Long-Term Advisors (LTAs) with key partner institutions; and, wider anchoring of programme objectives and results through high-level participation of both countries in programme steering and high-level policy dialogues facilitated by the Royal Danish Embassies (RDEs). Programme management includes clear institutional structures based on high-level steering committees hosted by Deputy Directors General level and Danish Ambassadors.

The GtG modality has also proven successful in facilitating policy dialogue between Denmark and South Africa at ministerial level, and in promoting climate diplomacy and operational ties between the South African thematic line ministries and Ministry of Climate Energy and Utilities (MCEU)/DEA in support of the efforts to achieve global climate change mitigation.

2 Strategic considerations

South Africa is one of the transition and growth economies identified in the Danish Development Policy and Humanitarian Strategy, "The World in 2030" (January 2017), as being of paramount importance to achieving the Sustainable Development Goals (SDGs). In such countries Denmark applies development policy in a flexible way to maintain and support partnerships of a strategic nature concerning sustainable growth and development. DEPP III will constitute one such partnership, focusing on government-to-government cooperation, with a particular emphasis on knowledge sharing and capacity building in order to support implementation of the Paris Agreement and long-term energy transition in South Africa.

A key criterion for DEPP III partner selection is the national commitment to reduce GHG emissions and interest in collaborating with Denmark to benefit from leading competences in green energy transition. South Africa has been selected to remain as a strategic partner for the DEPP III due to the successes of DEPP II in assisting the Electricity Supply Commission of South Africa (Eskom) in greening the power production as well as the country's current and forecasted acceleration in energy

demand, significant CO_2 emissions and the potential for cost efficient reduction of GHGs. As a major economy in Africa, a technical and economic leader in the sub-continent and a comparatively large emitter of GHGs, the successful completion of its low carbon transition will play a significant role globally in achieving the objective of the Paris Agreement. Denmark is uniquely positioned to assist South Africa to accelerate transition to clean energy in the power sector in support for South Africa's present NDC goals, and even to help spur increase the level of ambition for future updates of South Africa's NDC.

In accordance with the objective and principles of the Danish Climate Envelope, the long-term strategic objective of DEPP III will be to achieve a transformational and sustainable shift to renewable energy and energy efficiency through enhanced policy frameworks and markets structures. Interventions will be delivered within four thematic areas where DEA has extensive competences and a comparative advantage over most, if not all, other leading energy authorities. The four thematic areas are:

- Long-term energy modelling and planning
- Enhanced framework conditions for renewable energy
- Integration of renewable energy and flexibility of the power sector
- Energy efficiency

Using the energy sector's perspective and thematic areas presented above as a departure point, DEPP III will have an increased strategic focus on climate change mitigation and the linkages to the Paris Agreement. Emphasis will be on a cost-effective implementation of the NDCs (updated NDCs to be submitted in 2020) in combination with ongoing support for partner countries to raise their climate ambitions when updating their NDCs again in 2025.

Based on this the DEPP III's overall strategic objective is defined as:

> *The partnership countries achieve low carbon development, implement the Paris Agreement on Climate Change and continue upscaling and realising their NDC goals.*

The country objective for South Africa is defined as:

> *South Africa develops low carbon pathways related to energy in support of their NDC and South Africa upscales NDC mitigation targets and related measures by 2025.*

Since the beginning of the democratic government, South Africa has seen very large growth rates, especially up to the 2008. More recently, a combination of low growth, high unemployment, systemic corruption, high crime rates and social instability have become challenges that require immediate and long-term solutions. The energy sector exhibits signs of suffering from several of the issues mentioned but it is also a key part of the solution. Lack of energy threatens the entire economy and solving the power shortage has become the number one priority for the power sector and the government. In the period leading up to the formulation of DEPP III, South Africa has been experiencing many load-shedding events - load shedding is a technical term used when parts of the electricity grid is shut down in order to prevent a complete collapse from overloading -, as its aging and poorly maintained network of coal-fired power plants was unable to meet the national demand for power. Less than half the available power capacity was actually supplying energy at a stable and reliable rate. The Danish energy system is grounded on three main pillars: renewable energy, high level of security of supply and affordability. Furthermore, Danish power plants are among the most flexible in the world and so DEA has readily available expertise that can make a substantial contribution to alleviate the shortage by assisting in power plant flexibility and facility the introduction of renewable energy resources, particularly wind-energy farms. This opportunity to address an urgent national priority, and to achieve immediate, measurable results, represents a strategic opportunity for the ongoing DEPP II and the forthcoming DEPP III. Both programmes can demonstrate unequivocally the practical benefits that the cooperation can deliver in the short-term as well as the prospects of further expanding the scope of the collaboration to long-term energy modelling and planning with an analysis of the entire energy system. The DEPP III programme will help to further raise Denmark's profile in South Africa and strengthen Danish influence and cooperation across many sectors.

In line with "The World 2030" the overall strategic objective of DEPP III will be achieved through a GtG modality in a partnership between equals, with peer-to-peer institutional exchange of experience at both policy and operational level. The cooperation in South Africa ranges from high-level policy dialogue promoting low-carbon economic development to technical support focusing on enabling frameworks and solutions for renewable energy and energy efficiency. This provides opportunities to showcase Danish experience from the energy sector and contributes to the Danish lead of the SDG 7 and to Danish Embassies as climate front posts in the partner countries.

Box 1: Government to Government Cooperation as an effective tool of capacity development

- The DEA is responsible for creating a well-informed and evidence based environment for policy decision making for Denmark to meet the climate mitigation targets of the Danish Climate Act within the energy sector. The DEA is also responsible for formulation and implementation of energy related policies and regulation in Denmark.
- The DEA encompasses four decades of experience for promoting green growth by securing evidence based decision making, formulation of policies and regulatory frameworks as well implementation of policies and regulation for the energy sector.
- DEPP III rests on the shoulders of a well-tested GtG modality for sharing valuable Danish competences on low carbon development and how to combine economic growth while reducing GHG emissions.
- DEA contains unique and hands-on experience for securing frontier levels of energy efficiency, long-term energy planning, favourable framework conditions for renewable energy, and integrating variable renewable energy and security of supply. To a large extent, these experiences are only available to DEPP III partner countries via the GtG modality as other development partners and consultancies do not hold such information.
- DEPP III provides access for partner countries to learn from Danish experiences through a peer-to-peer modality. The direct exchange between partner line ministries/agencies and DEA is to a large degree unrivalled and not provided by other development actors in the partner countries.
- The GtG modality and the DEA as representatives of the Danish central government provides high level of credibility and access to high-level decision makers in the partner countries. Recognized high level of credibility is also a driving force and clear commitment for DEA to deliver world-class expertise to partners under DEPP III.

DEPP III will be posting a Long Term Advisor (LTA) at Eskom. The LTA will deliver technical capacity to Eskom and contribute to fruitful and trust-based relationship between the partners and DEA. In addition to technical outputs and deliverables, the LTA will ensure that the programme support is well anchored and sustained within Eskom. Among other responsibilities, the LTA will ensure that DEPP III activities match the needs and priorities of the partner institution. The Danish presence in South Africa and capacity will be increased by creating clear ties between the Sector Counsellor at the RDE who will cooperate closely with the LTA and the programme partners.

In addition to climate change mitigation, the DEPP III programme in South Africa will include tangible contributions as well as co-benefits to sustainable development with a particular focus on Just Transition when progressing towards renewable energy. The programme will also provide support for SDG 7 and SDG 13. Please see a description of sustainable development aspects and linkages to SDGs in section 4.4.

DEPP III will also support the RDE to inform and leverage the policy dialogue in South Africa where RDE has been appointed as climate front line mission to promote the Danish Government's climate ambitions and solutions. To enhance the linkages between technical assistance and climate/economic diplomacy, DEPP III is intended to serve as an operational mechanism to support the Danish frontier position on climate change at both levels.

2.1 Strategic engagement and cooperation

Experience from the previous DEPP programmes has shown that although there are clear and demonstrable pathways to achieve cost-effective transition of the energy sector in parallel with enhanced economic growth, there are opportunities to make an incremental strategic push in direction of low carbon development in each DEPP III country by supporting DEPP III non-core partners. Therefore, to complement support to DEPP III partnerships, 6% of the DEPP III budget (DKK 15 million) is Unallocated for Strategic Engagement and Cooperation (SEC) eligible for all four countries and aimed for activities with non-core partners.

The purpose of SEC is to support an enabling environment for informed decision making, policy dialogue, climate diplomacy and ultimately transformational change towards low carbon development of the energy sector by entering into new partnerships with civil society, the private sector actors, academia and multilateral organisations.

The approach is to strengthen participation in the discussion and information exchange around the low carbon energy development agenda in a variety of public forums through cooperation with technical and non-technical stakeholders, outside the core circle of existing partners. These partners may include civil society, academia, multilateral organizations, private sector actors, and other complementary parties. To support such activities, SEC funds are available at programme level to support SEC activities in the countries or regionally, in addition to the main DEPP III support to the partner countries.

The SEC support contributes to achieving the strategic objective of DEPP III through the following overall outcome:

- Low-carbon pathways, cost efficient NDC implementation and upscaling of NDC targets within the energy sector are enabled based on collaboration, exchange of information and awareness raising with non-core partners focusing on energy and climate change mitigation topics

The indicator for SEC is defined as number of strategic engagements with civil society, the private sector, academia and multilateral organizations conducted to support low carbon development, NDC implementation and upscaling of NDC targets in the country.

Based on the above outcome and indicator, SEC improves the enabling environment for technical and policy development on energy and climate change mitigation topics which will support accelerated implementation of current NDC targets and upscaling of future NDC targets. Due to the uniform focus on low-carbon pathways, cost efficient NDC implementation and upscaling of NDC targets, the SEC outcome and activities with DEPP III non-core partners will contribute to the overall strategic objective and country objectives of DEPP III.

Themes to be supported by SEC may fall within the following areas of engagement:

- Enhanced policy dialogue and climate diplomacy on energy and climate change mitigation
- Enhanced cooperation and coordination with multilateral organisations, particularly Danish funded multilateral initiatives engaged in low carbon development in the partner countries
- Interaction with civil society regarding climate change mitigation, just transition, gender equality, public outreach and advocacy for low carbon development
- Support framework conditions for private sector engagement in support of the Paris Agreement on Climate Change and SDG 7 and 13
- Enhanced collaboration with financial organisations to promote an enabling environment for investments in renewable energy and other areas in support of low carbon development in the partner country
- Increased cooperation and coordination with academia
- Increased south-to-south cooperation between DEPP III partners and other relevant actors

Identification of relevant SEC activities will be a joint process between the Sector Counsellors at RDE in Pretoria, the LTA, DEA and identified SEC partner. SEC partners are anticipated to provide internal resources, financial or in-kind, as part of the mutual collaboration.

An example of a relevant and potential SEC activity could be a collaboration between the DEA, South African National Energy Development Institute (SANEDI) which is the technology development agency under DMRE, South African Local Government Association (SALGA) and relevant universities in South Africa and Denmark and private technology providers. The work would not be aimed as academic research, but rather explore options for small-scale renewable energy solutions in local communities, both technological solutions as well as feasible business models and on the other hand assess options for "just transition" focusing on the societal impact of renewable energy, hereunder effects on poverty reduction, job creation and effects on local environment. This would contribute directly to SDG 7 and also empower local authorities to engage in more ambitious NDC objectives.

3 Justification for programme design

3.1 National sector development priorities and challenges

South Africa's national sector development priorities consider both development needs and climate change imperatives. South Africa faces the challenge of climate change as a developing country, with overriding priorities to eliminate poverty and eradicate inequality. In addition, South Africa is presently facing acute energy challenges that hamper economic development.

Since the advent of democracy in South Africa, in an effort to scale-up electricity production to meet the demands of a newly enfranchised majority and a rapidly growing economy, South Africa invested heavily in coal-fired power plants. Some of these investments can now be seen as poorly directed and, a combination of faulty power plant design, ineffective management, and short-sighted political decision-making has left South Africa with an energy system under enormous pressure. The power sector is currently heavily dependent on coal, with a fleet of old and inefficient coal-fired power plants that are coming close to the end of their design life. The current energy sources are coal 66%, oil 22% and the remaining approximately 12% comprises gas, renewables and nuclear energy. The power sector is the single largest emitter of CO_2 accounting for 50% of total carbon emissions. The volume of renewable electricity that is integrated into the grid is around 5%.

Through the United Nations Framework Convention of Climate Change (UNFCCC) focal point, Ministry of Environment, Forestry and Fisheries, South Africa signed the Paris Agreement on 22nd of April 2016 and adopted NDC targets include reduction of the share of coal-fired plants and increased generation from renewables and reducing South Africa's reliance on coal for energy to less than 20% by 2050. South Africa's NDC was formulated in the context of the environmental right set out in section 24 of the Constitution, and its National Development Plan (NDP), which provides a '2030 vision' to guide the country's sustainable development trajectory where poverty is eliminated and inequalities are reduced by 2030. The implementation of the 2030 NDP vision is further elaborated in its climate policy (the 2011 National Climate Change Response Policy (NCCRP)), climate-compatible sectoral plans and its National Sustainable Development Strategy. Good progress has been made in addressing the global issue of climate change – such as signing into the law of the Carbon Tax Act which is meant to compel businesses and individuals to reduce their greenhouse emissions.

In terms climate-compatible sectoral plan, the Integrated Resource Plan (IRP) 2019 outlines the intended direction of national electricity infrastructure development. According to the plan, the share of coal-fired power generation will drop from the current 80% to less than 50% by 2030. The specific targets for the power mix are: coal 46%, gas 16%, PV 10%, hydro 6%, nuclear 2.5% and wind 15%. The overall aim is to reach 30% clean energy in the energy balance by 2025 while at the same time transforming and increasing the sustainability of the energy sector with universal access to modern energy.

In keeping with the country commitment to progress its contribution to the global effort to mitigate climate change, South Africa has already made significant investments in mitigation actions. As part of a Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) has approved 79 renewable energy independent power producers (IPP) projects, total 5,243 MW, with private investment totalling ZAR 192 billion (approx. DKK 70 billion).

Although there is a commitment to systematically reduce carbon emissions, this must be seen in the context of the South African political economy. During the time of minority government, large segments of the population were deliberately excluded from sharing in the benefits of modernisation. The power sector was structured to serve a ruling minority even as the raw materials on which it relied were extracted from rural areas that were left with limited or no access to electricity. The majority governments have been determined to rectify this situation by expanding supply to as much of the population as possible and especially not to leave any group or region unserved.

The principle of a Just Transition has been adopted whereby change should take place within a framework that secures workers' jobs and livelihoods and protects the most vulnerable, especially poor and working class communities. Development of the power sector must, therefore, prioritise the extension of services to the whole population and take the needs of the workers in the supply chains. Hence, the necessary energy system transformation poses major social challenges for South Africa where more than 120,000 jobs depend directly or indirectly on coal mining, further aggravated by poverty, inequality and unemployment. Just transition is a fundamental driver for change in South Africa. Just Transition across various sectors is clearly important, but it requires proper planning and government intervention. It will not just happen by itself. Market forces may drive many changes, but they will not necessarily be "just" and not in the pace that is dictated by climate change or the NDC.

The key issue in this topic in South Africa is that there is no official planning around Just Transition, although the National Planning Commission is looking into it. Several civil society organisations, industry players and trade unions are working on this issue, but the central stakeholders need support. The DEPP III programme will contribute to visualise what possible pathways are available.

There is a great opportunity to create many decent jobs and livelihoods within a system that prioritises environmental sustainability, access to clean and sustainable energy and climate-change mitigation. Just transition has the priority before a green transition in the sense that it will be politically difficult drive a green transition without ensuring that it is just. A major hurdle in this has been trade union action that in the short term has, among other things, limited access from IPPs to enter the market. This has in

turn contributed to political uncertainty about the commitment to a green transition and the role of Eskom.

DEPP III has been designed through its varied palette of activities to address these challenges, highlighting the technical and political enablers of change and contribute to the economic and societal efficiency of an implementation of the IRP 2019 in timely manner. In details, there will be peer-to-peer assistance in stabilising and improving the South African power grid, making the coal-powered plants more efficient, integrating more power from renewable sources and system planning that allows accurate forecasting and target setting. This will be coupled with assistance in implementing holistic planning approach to renewables sector that covers spatial, social, environmental and infrastructure considerations.

3.2 OECD-DAC quality criteria

The Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) has laid out six[7] evaluation criteria (relevance, effectiveness, efficiency, impact, coherence and sustainability) which have come to serve as the core reference for evaluating international cooperation projects and programmes. The DEPP III objective in South Africa is that the country develops a sustainable and low carbon energy mix in accordance with its NDC targets, which will enable it to upscale NDC targets by 2025. This will be achieved through three development engagements that have been designed in close collaboration with partners to meet DAC criteria, i.e. to ensure that: all interventions should be relevant to the context, achieve their objectives, deliver results in an efficient way, and have positive impacts that last.

Relevance, the extent to which the activity is suited to the priorities and policies of the target group, recipient and donor: The partnership country programme and its Development Engagements are aligned to the South African Government's priorities, not only its commitment to meeting its NDC targets, but its priority of achieving a "just transition", its focus on providing clean, affordable energy to all of its citizens, its commitment to increase the share of renewable energy and reduce dependence on coal and its determination to reduce air pollution. The power sector is the single largest emitter of CO_2 in South Africa, accounting for 50% of total carbon emissions. The Government recognizes that the high use of fossil fuels is contributing to climate change and regards climate change as one of the greatest threats to sustainable development. The IRP 2019, commits to reducing the share of coal-fired power generation from the current 80% to less than 50% by 2030. At the same time the government has an absolute priority reducing the current uncertainty in energy supply while moving towards universal access to modern energy. The development engagements are tightly focused on these priorities. Development Engagements assist government policy formulation, increase the stability of the transmission network, and support transition to a liberalised power market. All of these allow broader

[7] In 2019 one major new criterion – coherence – was added to better capture linkages, systems thinking, partnership dynamics, and complexity.

and more reliable access to electricity, renewable energy and reduce losses and inefficiencies in the power supply system. These interventions utilise the core competences of DEA and Energinet, which are the repositories of Denmark's national strengths and competences, in particular in relation to renewable energy, energy planning, and the reform of energy policy frameworks. The inputs required from DEA are thus well aligned with its core competences and its overall objectives for DEPP III.

Coherence, the compatibility of the intervention with other interventions in a country, sector or institution: There is a need for coherence, so that the synergies (or trade-offs) between policy areas can be identified, particularly with regard to the climate emergency. The programme pays great attention to the need to achieve Just Transition of the energy system. This is a key requirement in the South African context since the national government, regional and municipal authorities are heavily engaged in addressing the inequalities that persist since before South Africa's political reform. For this reason, development engagements also are designed to support areas that assist in maintaining economic growth and impact other priorities such as public health benefits of reduced air pollution, energy security and employment opportunities. Development engagement 2 focusing on capacity development within Eskom on strategy and planning will also support a knowledge management platform for sharing information with a wide range of stakeholders to a shift to market-based solutions. By doing so, DEPP III addresses interlinkages with activities carried out by other government institutions in the sector (so-called "internal coherence"). Complementarity, and coordination with others such as GIZ, and avoidance of duplication of effort ("external coherence") is achieved by the careful coordination of the National Energy Executive Coordination Committee, through which the South African Government actively engages with other development partners on the topics of climate change mitigation and clean energy development. DEPP III preparation included meetings with these agencies to identify areas of synergy and avoid risks of duplication. Further donor coordination will be conducted via the Sector Counsellor or equivalent at the RDE.

Effectiveness, the extent to which an activity attains its objectives: Priority of the DEPP III is given to interventions where transformational change to renewable energy and energy planning can lead to cost-neutral or even financially advantageous changes to policies and market structures. In South Africa DEPP II has already shown immediate benefits in improving the security of power supply from the aging fleet of coal-fired power plants. DEPP III targets both these immediate and highly visible improvements with longer-term interventions aimed at improving the access to the power market, particularly for renewable energy producers. This includes changes to procurement and market systems (under development engagement 1), institutional structures where the government has already expressed the desire to implement reform of the generation, transmission and distribution systems (addressed in development engagement 2 and 3).

Efficiency, the use of the least costly resources in order to achieve the desired results: The cooperation in South Africa builds upon the relationships established in the DEPP programmes since 2012,

ensuring that the approaches and methodologies are driven by partner demand, and have already been tested and deemed fit-for-purpose. This will ensure reduced establishment costs and economies of scale. The partnership approach where the technical assistance is directly paired with a peer partner is highly valued by Eskom, because it, unlike other development partners' support, generates flexibility, is tailor-made to the institutions specific needs and it provides direct input to the partner institution's mandates. This approach has been modified for Development Engagement 1 to allow support to be rapidly switched between partners in case of delays. In this way, efficiency will not be compromised in case of delays.

Impact, the effects on social, economic, environmental and other development indicators: South Africa has great potential for reduction of GHG emissions. If successfully implemented, DEPP III will lead to the creation of sustainable pathways for increasing shares of renewable energy in the power system and a more reliable and stable electricity supply from the grid. The impacts will make a contribution not only towards the global aim of limiting global temperature rise but would also be help indirectly to generate jobs and reduce poverty, reduce air pollution thereby contributing to public health, and improve governance with the opening up of policy formulation to public scrutiny through the knowledge management platform and the greater involvement of local and municipal government in planning and commissioning power supplies.

Sustainability, whether the benefits are likely to continue after external support has been withdrawn: The design and methodology of DEPP III put a great premium on the institutional transformation and long-term sustainability of the interventions. Development engagement 1 aims to support the production of internal South African government-owned policy documents, procurement systems and market access rules which will then be the long-term responsibility of DMRE and IPPO for extension, updating and dissemination. In doing this they will eventually integrate the necessary system and procedural changes into their working practices. Development engagement 2 aims at capacity development of the technical departments within Eskom in grid and energy system planning to support effective transition to a liberalised market. This will lead to a rising share supply from renewable energy sources and a consequent demand for planning support from Eskom that will have to be met. Development engagement 3 supports the reorganisation of Eskom to maintain and sustain its capacity to meet the new demands. Thus, DEPP III will support development of strategies, legislative instruments, knowledge platforms and organisational frameworks for renewable energy and low carbon development that will influence central and provincial government decision making for future energy generation.

4 Presentation of the programme

4.1 Justification of choice of partners and criteria used

DEPP III builds on the progress achieved and the lessons learned from DEPP II. It would usually be advantageous to continue working with the same partners, to benefit from previous knowledge of and

working relationships with the partner and to consolidate the achievements. In South Africa, however, there was a delay of more than one year starting the programme with one of the DEPP II partners, the Department of Energy (DoE) so the risk of working with that partner had to be carefully assessed. Recently there has been a restructuring of the Government's energy and mineral resource portfolios to form a new Department of Mineral Resources and Energy (DMRE) and the appointment of a new minister. The responsibilities of DoE now reside with DMRE, which also retains the DoE departmental structure and most of the DoE staff.

Key criteria for partner selection include:

- Relevance of authority and mandate regarding energy and climate policy development
- Demand from relevant national sector leaders and from the agency itself for the competences and modality of cooperation offered by the Danish Energy Agency
- Mandates that directly address the key objectives of the DEPP III
- Capacity to engage in a cooperation programme at the ambition level agreed
- Ability to use the inputs to achieve the desired outcomes either directly or by influencing policy, planning or legislation
- Priority and need in relation to the DEPP objectives and the national context in which they operate
- Acceptable level of risk that the programme can be implemented and that the Theory of Change (ToC) will be valid

During the identification and formulations mission, a broad range of potential partners that had expressed interest in working with Denmark within the DEPP III programme were assessed. Key findings included the following:

- Department of Mineral Resources and Energy (DMRE) is responsible for ensuring development, utilisation and management of South Africa's energy sources. Furthermore, the DMRE has a coordinating role for the IPP office and are relying on them to implement the procurement of renewable energy supporting the IRP 2019. The NDC are the remit of the Department of Environment, Forestry and Fisheries, but the DMRE will ensure its fulfilment, partly through the IRP2019 who's purpose it is to lay out the plan on how to reach the NDC's. DMRE would be an ideal partner in terms of its remit and centrality, but some risk remains over management commitment.

- The IPP Office provides advisory services and guidance to independent power producers and plays an important role in providing process certainty for private funding to enter the power generation market. The renewable energy procurement programme led by the IPP Office has so far attracted more than R209 billion (DKK 83 billion) to the economy in the form of private investments and the programme is having a significant impact on, job creation, community development, economic transformation and climate change mitigation. The institution is a highly professional organisation well-resourced and managed. IPP is an independent organisation with

reference to DMRE, National Treasury and the Development Bank of Southern Africa, and an arrangement that involves both will be beneficial.

- The dominant stakeholder in the South African electricity sector is Eskom which is mandated to provide electricity in an efficient and sustainable manner, including its generation, transmission, and distribution and sales. Eskom supplies almost 95% of all the energy production in South Africa. The risk of working with Eskom would be low, based on the experience of DEPP II, but Eskom faces huge upcoming challenges due to its debt and its imminent restructuring.

It was concluded that DMRE, the IPP-office and Eskom are all critically important stakeholders for the programme would make the best partners in terms of the objectives of the programme and the fit for the skills that DEA can offer.

Part of Denmark's contribution to the strategic development of the energy system in South Africa in DEPP III aims at developing and strengthening Eskom´s capacity to enhance renewable energy integration into the power system improving the reliability of the security of supply. The extensive experience and expertise from the green transition of Denmark´s energy system will support Eskom to develop regulatory framework, operational procedures and flexible options in the power system that support the transition towards a cost-effective security of supply with a rising share of electricity from variable renewable energy sources in South Africa. In details, the unique support from DEA in close partnership with the Danish Transmission System operator (TSO), Energinet, will be able to assist Eskom in developing concrete approaches in a shift to market-based solutions, with Just Transition, that integrate larger share of variable renewable energy sources into the grid. The support process will be performed by sharing knowledge and expertise through peer-to-peer interactions on how to operate the power system with a higher degree of flexibility, and by providing tools and methodologies to perform accurate renewable energy generation forecasting. It should be mentioned the Danish peer-to-peer kind of TA support between Eskom and DEA/Energinet is a unique feature of TA modality compared among the other donors active in the renewable areas such as GIZ.

GIZ is also extremely active in within variable renewable energy sources integration and since DEPP II, DEA has been in close dialogue with them to ensure coordination among activities, avoid overlapping and for exploring synergies for leveraging results of the two programmes. In DEPP III, DEA aims to perform some of the programme activities and capacity building under development engagement 2, Output 6 ("Grid planning and integration of RE from transmission to distribution level strengthened, considering the stochastic nature of RE with cost-effective measures of meeting the IRP 2019 requirements, without compromising grid stability") jointly with GIZ.

Recently the restructuring of Eskom was announced through the publication of "Roadmap for Eskom in a Reformed Electricity Supply Industry, 2019". The Roadmap highlights the issues that Eskom is

currently facing and then sets out the government's plan to address them. The plan is for the legal separation of the utility into three companies - generation, transmission and distribution - by December 2022. DEA has deep experience and expertise from the transition of the Danish energy system and the transformation of the Danish energy market. This, together with the current successful close cooperation with Eskom and intimate knowledge of the organisation, makes DEA ideally placed to advise on the restructuring of Eskom and the modernisation of the institutional and planning frameworks of the daughter organisations.

South Africa has instituted an internationally acclaimed IPP program, the wind power component of which was supported by the previous DEPP programmes and the Danish development of a South African wind resource atlas, to supply renewable energy (RE). The IRP 2019 provides a foundation for a substantial increase of the share of RE. Denmark and DEA has an extensive experience in RE procurement procedures, standards and practices that will be of real and tangible benefit to the IPP office.

A key aspect of DEPP III in other countries has been the positioning of LTAs in partner institutions. LTAs have proven to be a critical element of the most successful interventions for capacity development under DEPP II. The LTAs deliver technical capacity to partner's organisations and contribute to fruitful and trust-based relationship between the partners and DEA. In additional to technical outputs and deliverables, the LTAs ensure that the programme support is well anchored and sustainable within the partner institutions. In DEPP III an LTA will be stationed in South Africa for the first time. Among other responsibilities, the LTA will ensure that DEPP III activities matches the needs and priorities of the partner institution but will collaborate closely with the advisors and staff at the RDE.

There's clear division of labour between the LTA based at Eskom's office for Organisational Strategy in Megawatt Park, Johannesburg, and the counsellor and staff based at the RDE in Pretoria.

The LTA work will revolve around the technical advisory function at Eskom mainly dealing with the technical aspects of the liberalization of the energy market and the subsequent divisionalisation of Eskom. The LTA will together with the advisors in DEA, also be part of the coordination of technical and operational capacity development activities in Eskom but also with the other partners, DMRE and IPPO. The embassy-based counsellor and staff will liaise frequently with the LTA and DEA and coordinate policy and climate diplomacy related activities with the partners and other relevant ministries and civil society organizations. There will be a specific focus on Department of Public Enterprises (DPE) and Department of Environment, Forestry and Fisheries (DEFF). DEFF has the primary responsibility for the development of the NDC and also represents RSA in UNFCCC negotiations. DPE is the owner of Eskom.

4.2 Integration of results and lessons learned from previous cooperation

The GtG model for the cooperation is valuable and highly appreciated by the partners. The high level of continuity from the previous phases of collaboration has considerable advantages, and long-term technical cooperation can create possibilities for further bilateral relations. The demand-responsive approach, whereby DEA adjusts to changing political situations and urgent needs, was confirmed by partners to be extremely important and increased the value of DEA's support. The Danish Ministry of Foreign Affairs (MFA) sees DEPP III as a strategically important programme for Denmark and South Africa, and as a platform to facilitate bilateral climate diplomacy.

It is too early to assess the outcome of DEPP II but there have been highly valuable outputs and indicators of long-term success, as well as setbacks that provide lessons for development of DEPP III.

The start of the Development Engagement with DoE was delayed by 16 months. A LTA to the programme could not be recruited because of failure to agree on a suitable candidate; sufficient resources were not always allocated to work with DEA advisors; and there was difficulty in obtaining sufficient access to the energy modelling systems, data background and assumptions used by partners.

The context has recently changed, and DEPP III has been designed to avoid, or mitigate the remaining risks so that the prospects of successful cooperation are greatly enhanced. Changes and/or mitigation measures include that the South African energy and mineral resource portfolios have been restructured, DoE functions have been transferred to DMRE and a new minister has been appointed. High level meetings have taken place between the Danish Ambassador and the Minister in which the Minister expressed great commitment to the cooperation and pledged to ensure smooth implementation going forward.

Second, the cooperation is directly targeted at the highest priority of DMRE and prioritises the Just Transition. A development engagement involves both DMRE and IPPO. This will allow DEPP III to strengthen the IPPO in their policy dialogues with DMRE and ensure a more effective implementation of existing policy and the development of new related policy measures relating to RE and procurement.

The DEPP III has secured the participation of the relevant DMRE chief directorate in the steering committee of the programme in order to safeguard an open and strategic exchange ensuring coherence between the development engagements. According to the DMRE, renewable energy IPPs created 38,701 jobs years for youth and women from the surrounding communities, which is an objective at the forefront of the just transition. DMRE's direct involvement strengthens its political credibility and enhances the reputation of the institution. The compound structure of the Development Engagement also allows resources to be moved quickly to other activities if any delays should occur.

The Mid-term review (MTR) of the DEPP II carried out in the spring of 2019 confirmed that DEPP II is a pertinent vehicle for facilitating long-lasting energy cooperation between Denmark and the partner countries. The MTR also found the programme highly relevant for partner countries' efforts to realise national policies and targets to reduce GHG emissions and to undertake a green energy transition. The MTR verified the technical focus areas as highly relevant to support further uptake of renewable energy in the countries. The MTR confirmed that the engagement with Eskom was well coordinated with the support provided to Eskom by GIZ, not least ensured by Eskom itself, and that the programmes had exhibited good synergy.

The focus of DEA on its four thematic areas of cutting-edge expertise has been successful. MTR and national partners found the programme highly relevant in all countries. MTR also found that the inputs to national energy planning, improved framework conditions for renewable energy, integration of renewable energy and energy efficiency are highly relevant topics that facilitate a more efficient way of reaching the politically determined energy transition targets in the countries. It also acknowledged that DEPP II efforts to enhance the ability of a partner to carry out successfully a particular task or function were considered a success by partners.

The MTR also made recommendations for improving the DEPP II programme and enhancing future cooperation in South Africa, including the following:

- The posting of a LTA is a key element in the DEA implementation model. This was not possible in the South Africa DEPP II but should be strongly considered in DEPP III
- Review the appropriate balance between in-house staff from DEA/Energinet and consultants
- Simplify the management setup
- Adopt a more systematic and consistent approach to capacity development
- Improve communication with the Danish Embassy

To the extent possible, the recommendations from the MTR are currently being implemented under DEPP II and will be carried over to DEPP III. The review of capacity development in DEPP II has informed the formulation of DEPP III, and has influenced every aspect of DEPP III including the theory of change, the selection of partners, the formulation of the development engagements, the use of advisors; the results framework, the targets and indicators; the implementation manual and the reporting.

4.2.1 Approach to capacity development

DEPP III will, in its capacity development approach, make use of the following:

Preserve and reinforce the successful elements of capacity development: The focus on transfer of knowledge will continue in DEPP III under the GtG modality. The successful tools and techniques adopted in DEPP II will be continued with an aim to strengthen the capacity of individuals and partner institutions to accommodate the partner's priorities for low carbon development. Tools and techniques include peer-to-peer exchange with partner institutions; twinning of national and Danish specialists; expert-to-expert on the job training; training courses; lectures from invited specialists; seminars that might include a wider range of stakeholders; joint provision of technical information, analytical studies, manuals and guidance; and, exposure of partners to new approaches through study tours and field visits. All tools and techniques will be contextualized to the partners needs and will cater for a wider institutionalization of the approach for capacity development.

More emphasis will be placed on techniques that may become more valuable in DEPP III. This includes exploring options for partner institutions to adopt and apply provided relevant tools or content as part of their internal procedures in order to promote self-driven capacity development within the institution. Also, tools and content for capacity development will to the extent possible be scalable and replicable whereby partner institutions can use it outside DEPP III.

Additionally, DEPP III will include more emphasis on policy dialogue aimed at reinforcing the enabling environment for transformation; awareness raising aimed at further policy outreach; knowledge management which ensures that learning, change and development are retained when staff move; research could be developed without much cost to the programme by networking with universities to contribute to dissemination of good practice and amplify the overall effectiveness of the programme; and, organizational strengthening where necessary to remove barriers to reform, and acceptable to the partner.

Formulation of capacity development activities: Capacity development activities will be formulated as part of the Terms of Reference (ToR) for each medium to long-term activity in direct collaboration with partners. ToRs will include particular attention to documenting the needs of the partner, clearly setting out the scope and objectives of the capacity development activities and reaffirming that indicators, set out in the Development Engagement documents capture the capacity development aspect and all indicators are Specific, Measurable, Achievable, Relevant and Timebound (SMART).

Sustainability of institutional capacity: Establishment of an enduring institutional capacity is designed into programme objectives and targets. The necessity of institutional development and the ways in which this can be assured will also be incorporated into implementation manuals, LTA ToRs, consultant ToRs, monitoring systems and dialogues during the Steering Committee meetings.

Reinforcement of reporting, monitoring, and evaluation: Capacity development interventions will be monitored against indicators as defined the DEDs. Applied indicators will ensure progress and internal quality control towards the objectives of these interventions. The MTR of DEPP III will assess the long-term sustainability of capacity within institutions and guide any required adjustments within the programme.

Applied ToRs for individual assignments under DEPP III will include SMART indicators addressing capacity development. As part of the implementation manual, a set of genetic indicators for measuring capacity development of partner institutions and staff as well as evaluation templates for training courses will be developed as standard reporting, monitoring and evaluation. These genetic indicators and templates will be applied in all ToRs and underlying activities of DEPP III. Using the indicators, and the collected values from each ToR will be applied to underpin the overall progress towards expected outputs and outcomes. Aggregation of collected values using the generic set of indicators for capacity development across activities and countries.

A narrative reporting on capacity development within each development engagement will be part of the reporting to the Advisory Group as part of standard reporting format. In addition, the DEPP III will explore options for reporting on capacity development as separate topic to the Steering Committees. The likely reactions of each national partner to receiving a separate section reporting on capacity development activities and impacts will be assessed by the RDE and DEA. The decision on whether to present this information to the Steering Committees will be determined on a case-by-case basis.

Use a greater range of technical assistance delivery mechanisms: the 5-year duration of DEPP III may give rise to opportunities to use techniques such as exposure events and the promotion of research to supplement core activities and to extend the influence and sustainability of the programme.

Use of external consultants for replicating tasks: DEPP III, with its greater emphasis on roll-out to the regions may need to make greater use of training courses. These may be delivered by the DEA staff, by external agencies, or a train-the-trainers approach may be adopted. External consultants will, in addition to specific technical inputs, be considered for replicating tasks that do not require DEA specialist expertise

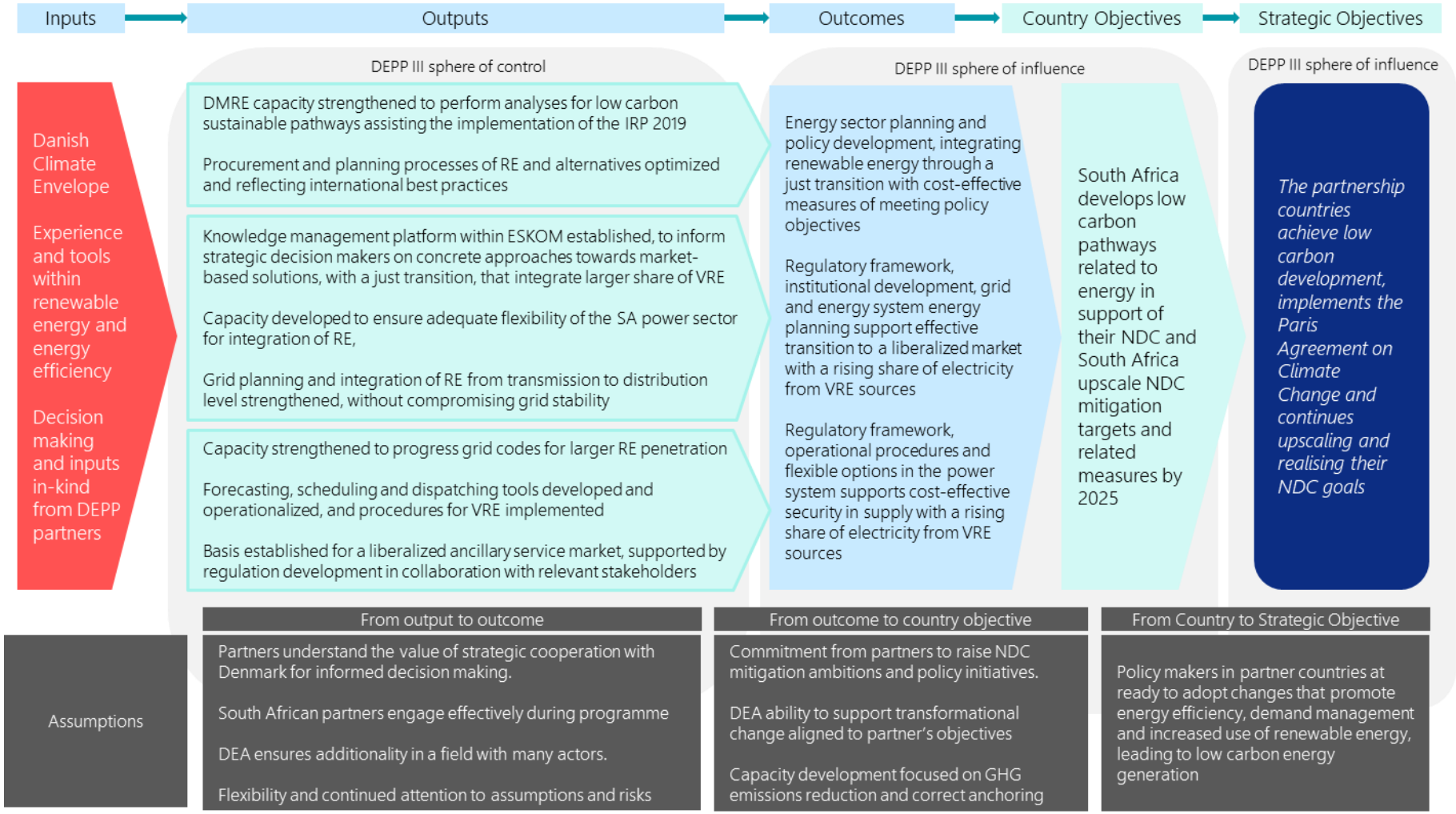
Dissemination, Awareness Raising, and Lesson Learning: there will be more dissemination and awareness raising in DEPP III to spread good practice, by facilitating awareness raising events and by providing access to information for development of academic papers, research, etc. When an

opportunity occurs, south-south exchanges between the partner countries will be facilitated. The custom of developing "good practice" or "impact papers" will be continued with dissemination through the DEA strategic communications focal point.

4.3 Theory of change and key assumptions

As shown below, the overall objective of DEPP III is to support the energy sector in South Africa to develop a sustainable low-carbon energy mix, which will enable the government to formulate more ambitious and achievable NDC targets by 2025.

The ToC and results framework rests on the assumption that policy makers in partner institutions at all levels are seeking and ready to adopt changes that promote demand management, increased generation and more efficient use of renewable energy, leading to low carbon energy generation. Risks to the effective realisation of this ToC are that: limited political commitment and leadership to retain a low carbon development path through renewable energy and energy efficiency; limited political and managerial mandate or abilities to implement policies, strategies and plans supporting green initiatives; lack of knowledge on financial competitiveness of renewable energy and how Just Transition, including job creation, can be achieved. There will be three Development Engagements:


Inputs
Outputs
Outcomes
Country Objectives
Strategic Objectives
DEPP III sphere of control
DEPP III sphere of influence
DEPP III sphere of influence
Danish Climate Envelope
Experience and tools within renewable energy and energy efficiency
Decision making and inputs in-kind from DEPP partners
DMRE capacity strengthened to perform analyses for low carbon sustainable pathways assisting the implementation of the IRP 2019
Procurement and planning processes of RE and alternatives optimized and reflecting international best practices
Knowledge management platform within ESKOM established, to inform strategic decision makers on concrete approaches towards market-based solutions, with a just transition, that integrate larger share of VRE
Capacity developed to ensure adequate flexibility of the SA power sector for integration of RE,
Grid planning and integration of RE from transmission to distribution level strengthened, without compromising grid stability
Capacity strengthened to progress grid codes for larger RE penetration
Forecasting, scheduling and dispatching tools developed and operationalized, and procedures for VRE implemented
Basis established for a liberalized ancillary service market, supported by regulation development in collaboration with relevant stakeholders
Energy sector planning and policy development, integrating renewable energy through a just transition with cost-effective measures of meeting policy objectives
Regulatory framework, institutional development, grid and energy system energy planning support effective transition to a liberalized market with a rising share of electricity from VRE sources
Regulatory framework, operational procedures and flexible options in the power system supports cost-effective security in supply with a rising share of electricity from VRE sources
South Africa develops low carbon pathways related to energy in support of their NDC and South Africa upscale NDC mitigation targets and related measures by 2025
The partnership countries achieve low carbon development, implements the Paris Agreement on Climate Change and continues upscaling and realising their NDC goals
Assumptions
From output to outcome
Partners understand the value of strategic cooperation with Denmark for informed decision making.
South African partners engage effectively during programme
DEA ensures additionality in a field with many actors.
Flexibility and continued attention to assumptions and risks
From outcome to country objective
Commitment from partners to raise NDC mitigation ambitions and policy initiatives.
DEA ability to support transformational change aligned to partner's objectives
Capacity development focused on GHG emissions reduction and correct anchoring
From Country to Strategic Objective
Policy makers in partner countries at ready to adopt changes that promote energy efficiency, demand management and increased use of renewable energy, leading to low carbon energy generation

4.4 Summary of development engagements and sustainable development

There will be three development engagements in South Africa, with the following titles and partners:

- Capacity Development on Modelling and Procurement of Independent Power Production with DMRE and IPPO
- Capacity Development within Eskom on Strategy and Planning
- Capacity Development for Renewable Energy Integration into the Power System with Eskom

4.4.1 Capacity development on modelling and procurement of independent power production

Through this development engagement DEA will develop capacity within DMRE and IPPO to assess and review external modelling analyses and to enhance tender procedures and mechanisms for procuring RE from IPP.

The Development Engagement will gradually develop DMRE's capacity to apply modelling tools until they can assess and introduce low-carbon pathways into South Africa's national energy system planning and policy development processes. In parallel, the Development Engagement will support IPPO in the areas of spatial planning, grid planning and connections, industry reform, market design and more effective auctioning processes thereby attracting further private investment in renewable energy supply. The ToC is that together these organisations will create an enabling environment that attracts more investment into renewable energy production and boosts the share of affordable renewable energy in the South African system. As a result, renewable energy will be integrated into the grid meeting policy objectives of the IRP 2019, contributing to a Just Transition of the power sector and allowing the adoption of more ambitious NDC targets.

Large focus will be placed to develop energy scenarios analyses targeting the 2030-NDC goals and objectives of the IRP 2019 focusing on identifying the optimum low-carbon pathways from a socio-economic, long-term perspective. Energy system modelling can provide insights into how such targets can be achieved in the most cost-efficient way, while taking nation-specific and local condition into account (resource potential, technical limitations, existing policies and more). In addition to providing insight into how to reach a specific target, energy system modelling can illuminate a potential for enhancing targets.

With regard to an ultimate solution to the global challenge of climate change, South Africa is firmly committed to work with others to ensure temperature increases are kept well below 2°C above pre-industrial levels. Further studies and continued updates of energy models, technology and consumption data should guide South Africa in the process of continuing its sustainable transition and delivering its contribution in achieving the long-term global climate targets. Energy system modelling can thus assist the investigation of how South Africa can contribute to fulfilling the Paris Agreement by including

scenarios with CO2 emissions consistent with existing and updated NDC targets and a 1.5 or 2 degree global warming scenario.

Through a more efficient implementation of RE IPP programmes and with a significant focus on just transition, the DEPP III programme will also promote sustainable development co-benefits concerning poverty reduction , economic growth, and employment. Furthermore, the programme will contribute to the global effort of South Africa to mitigate climate change through the consolidation of a sound enabling framework for attracting more private investments into the renewable energy sector thereby contribute to economic growth, poverty prevention and alleviation, access to energy and a cleaner and healthier environment.

The development engagement will contribute to SDG target 7.1 using indicator 7.1.2 by supporting further use of renewable energy as a clean fuel and technology. The development engagement will support South Africa to increase the share of renewable energy in the power sector and this development will result in an increasing share of the population with access to clean electricity. The Development Engagement will contribute also to SDG target 7.2 using indicator 7.2.1 as part of the support for further renewable energy generation.

The development engagement will also contribute to SDG target 13.2 using indicator 13.2.1 by supporting DMRE and IPPOs in formulating strategies, plans or initiatives for low greenhouse gas emissions development and low carbon sustainable pathways. The supported strategies, plans or initiatives will directly or indirectly be applied by RSA to update and communicate NDC by 2025.

The Development Engagement will contribute to SDG target 13.3 using indicator 13.3.2 by supporting human and institutional capacity development on climate change mitigation as a key feature across the programme. In compliance with SDG indicator 13.3.2, DEPP III will also support the communication of strengthened capacity if demanded by the partners.

4.4.2 Capacity development within Eskom on strategy and planning

The planned restructuring of Eskom is for the legal separation of the utility into three companies - generation, transmission and distribution, in what the government has termed “divisionalisation”. Through this engagement, DEA will bring its experience and expertise from the transition of the Danish energy system and the setup of the NordPool market to help Eskom to become a modern utility and system operator with clear division of responsibilities. The DEA will contribute so that decisions regarding the roles and responsibilities of the institutions in the new marketplace that will be created are made based on the best possible foundation.

Grid planning and integration of variable renewable energy sources from transmission to distribution level will be strengthened so that the stochastic nature of variable renewable energy sources can be accommodated without compromising grid stability.

A knowledge management platform will be established within Eskom, sharing information to inform high level strategic decision makers based on international experience and concrete approaches in a shift to market-based solutions. This will allow cost-effective measures of meeting the IRP 2019 through grid and strategic planning sharing knowledge across the institution and beyond and consequently provide an excellent source of inspiration for the establishment of an effective and transparent South African/Southern African power market.

To assist Eskom in changing and becoming a modern utility and system operator, the programme will contribute to increasing the capacity and stability on the grid, indirectly attracting investment and enabling a cleaner environment and development for all population groups – including marginalized groups that suffer from instability of the grid. A modernised Eskom will be able to provide access to energy to substantially more businesses and people that currently suffer shortages or lack of access due to a market not being able to cope with demand and therefore limits growth and development.

On a broader perspective, energy producers and renewables-project owners can be attracted to develop financial projects and specific investment proposals when a secure context of utilization exist. That is a cost-efficient, functioning and liberalized electricity market. Hence, market design and expansion can ensure a cost-efficient development of opportunities for energy producers in South Africa. Such approach will bring additional co-benefits from more ambitious energy policies and potentially lead to larger support of enhanced NDCs.

Large focus will be also placed in enhancing Eskom's capacity to ensure adequate flexibility of the power sector for integration of future large shares of RE, while enhancing a cost effective and reliable security of supply. The enhanced flexibility will likely allow to reduce the use of coal fired thermal power plants as baseload power sources, adapting their production according to availability from clean sources such as wind and sun. Eventually, this will reduce emission intensity across the energy sector and enhance cost effective and reliable security of supply.

The enhanced flexibility will likely allow to reduce the use of coal plants for energy purposes, adapting the production according to availability from clean sources such as wind and sun. Eventually, this will

reduce emission intensity across the energy sector and enhance cost effective and reliable security of supply.

The Development Engagement will contribute to SDG target 7.1 using indicator 7.1.2 by supporting further integration of renewable energy as a clean fuel and technology meeting policy objectives of the IRP 2019, contributing to a Just Transition of the power sector and allowing the adoption of more ambitious NDC targets.

The Development Engagement will contribute also to SDG target 7.2 using indicator 7.2.1 as part of the support for further renewable energy integration. The Development Engagement will support Eskom in further acceleration of the renewable energy integration through which will ultimately result in an increased share of renewable energy in the final energy consumption supported by an effective transition to a liberalized market.

The Development Engagement will contribute also to SDG target 13.3 using indicator 13.3.2 by supporting human and institutional capacity development on climate change mitigation as a key feature across the programme. In compliance with SDG indicator 13.3.2, DEPP III will also support the communication of strengthened capacity if demanded by the partners.

4.4.3 Capacity development for renewable energy integration into the power system

This engagement will develop Eskom's capacity to create and or improve the regulatory framework, in the power system to support cost-effective security in supply with a rising share of electricity from variable renewable energy. This will be accomplished through the development or enhancement of grid codes for increasing RE penetration, changing load patterns for promoting efficient operation of the network; developing better tools for forecasting, scheduling and dispatching variable renewable energy sources and ensure that these are applied. A basis for a liberalised ancillary service market will be also established, supported by regulation development and power system modelling in collaboration with relevant stakeholders.

As a result, in the five-year timeframe of DEPP III, flexibility of coal power plants will be increased and protocols will be in place to facilitate cost-efficient integration of thermal power production in the dispatch operation under conditions of high penetration of renewable energy generation. Stability issues caused by a larger share of variable renewable energy generation will be resolved and economic/market incentives, will be proposed, support the additional costs of the operational flexibility of thermal power plants. This will provide a platform for a shift to market-based solutions, as part of Just Transition, that integrates larger share of variable renewable energy sources into the grid.

In order for RSA to reach the NDC objectives there are a number of technical pre-requisites that needs to be met. There is a need to strengthen or create the regulatory framework for integrating large shares of variable renewable energy sources, thereby improving the capacity to forecast production in conjunction with the ability to ramp the thermal power plants up and down allowing variable renewable energy sources to be used at their full capacity. If these measures are not in place, the grid and energy supply in South Africa will be very vulnerable and will hamper economic and social growth dramatically. The activities in DEPP III programme are therefore essential for implementing SDG-7 objectives and visualise pathways for more ambitious NDC's.

By strengthening the capacity to progress technical regulations for increasing renewable energy penetration, Eskom system operators can promote an efficient operation of the network, thereby reducing curtailment and increasing the uptake of RE. Planning and regulation experience from Denmark can support the development of such framework conditions, which will decrease the overall cost of the green transition and potentially lead to larger support of enhanced NDCs.

The Development Engagement will contribute to SDG target 7.1 using indicator 7.1.2 by supporting further integration of renewable energy as a clean fuel and technology meeting policy objectives of the IRP 2019, contributing to a Just Transition of the power sector and allowing the adoption of more ambitious NDC targets.

The Development Engagement will contribute also to SDG target 7.2 using indicator 7.2.1 as part of the support for further renewable energy integration. The Development Engagement will support Eskom in further acceleration of the renewable energy integration through the establishment and or consolidation of operational tools and strategies that will ultimately result in an increased share of renewable energy in the final energy consumption supported by an effective transition to a liberalized market.

The Development Engagement will contribute to SDG target 13.3 using indicator 13.3.2 by supporting human and institutional capacity development on climate change mitigation as a key feature across the programme. In compliance with SDG indicator 13.3.2, DEPP III will also support the communication of strengthened capacity if demanded by the partners.

4.5 Results Framework, outcome indicators, monitoring and evaluation

Country Programme Objective	South Africa develop a sustainable and low carbon energy mix in accordance with its NDC targets, which will enable them to upscale NDC targets by 2025.

Engagement Title	Development Engagement 1: Capacity Development on Modelling and Procurement of Independent Power Production
Outcome	Energy sector planning and policy development, integrating renewable energy through Just Transition with cost-effective measures of meeting policy objectives
Outcome indicator	Sustainable pathways from long-term planning and scenario analysis with increasing shares of renewable energy, demonstrating just transition meeting policy objectives. Implementing energy sector policy and just transition requirements through effective and streamlined market-based procurement and holistic planning solutions

Output 1	Capacity strengthened to conduct energy sector modelling, peer review external modelling analyses, investigating low carbon sustainable pathways to South Africa's national energy system planning and policy development processes with a view to assist in the implementation of the IRP 2019 and enhancing economic growth and development.
Output 2	Procurement and planning processes of renewable energy and alternatives optimized and reflecting international best practices in the current and a future reformed liberalized market

Engagement Title	Development Engagement 2: Capacity Development within Eskom on strategy and planning

Outcome	Regulatory framework, institutional development, grid and energy system energy planning support effective transition to a liberalized market with a rising share of electricity from variable renewable energy sources
Outcome indicator	Institutional framework conditions developed Energy modelling scenarios applied to support the cost-effective market transformation and expansion of variable renewable energy sources Planning tools and operational procedures developed
Output 1	Knowledge management platform within Corporate Strategy in Eskom and beyond established, sharing information to inform high level strategic decision making based on international experience and concrete approaches in a shift to market-based solutions, with Just Transition, that integrate larger share of variable renewable energy sources into the grid.
Output 2	Capacity developed and know-how shared to ensure flexibility of the SA power sector for integration of RE, and enhance cost effective and reliable security of supply achieved
Output 3	Grid planning and integration of renewable energy from transmission to distribution level strengthened, considering the stochastic nature of RE with cost-effective measures of meeting the IRP 2019 requirements, without compromising grid stability

Engagement Title	Development Engagement 3: Capacity Development for Renewable Energy Integration into the Power System
Outcome	Regulatory framework, operational procedures and flexible options in the power system supports cost-effective security in supply with a rising share of electricity from variable renewable energy sources
Outcome indicator	Recommended amendments, enhancements and actions proposed on technical regulations (grid codes) % reduced curtailment and % increased uptake in variable renewable energy sources Energy modelling scenarios applied to support the cost-effective integration and expansion of variable renewable energy sources

Output 1	Capacity strengthened to progress grid codes for increasing renewable energy penetration, changing load patterns for promoting efficient operation of the network
Output 2	Forecasting, scheduling and dispatching tools developed and operationalized, and procedures for variable renewable energy generation implemented
Output 3	Basis established for a liberalized ancillary service market, including RE, supported by regulation development and, also by power system modelling in collaboration with relevant stakeholders

Daily progress will be followed by the Development Engagement partners and DEA, who will report progress towards outputs and outcome of this engagement through annual progress reporting to the Development Engagement Steering Committee. All reporting should, to the extent possible and when relevant, be disaggregated by gender, area, sector, etc. and forwarded to the DEPP III Advisory Group in Copenhagen, which follow the overall DEPP III Implementation Manual.

Detailed indicators for each specific Development Engagement output will be revisited and potentially refined as part of the inception, where annual targets, in line with already defined targets will be adjusted with reference to the guidelines for monitoring of the Danish Climate Envelope. Monitoring towards these targets will be reported through the annual progress reporting using a "traffic-light" system, where:

- "green" is on-track – implementation progresses as scheduled
- "yellow" is partly on-track, which needs an explanation by the partner and DEA including actions taken to get back on-track
- "red" is off-track, which needs a detailed explanation by the partner and DEA to the Steering Committee with recommendations of changes to the implementation to get the engagement back on-track. If "red" in two consecutive reporting periods, the Steering Committee may consider reallocation between outputs within or between the development engagements as deemed relevant

Monitoring of actual time spent by international and national TA will be reported in the annual progress reports by DEA, which will include an updated work plan for the following 12 months. Similar reporting will be done for workshops and study-tours.

The Danish Ministry of Foreign Affairs shall have the right to carry out any technical mission that is considered necessary to monitor the implementation of the programme. This includes a mid-term review. After the termination of the programme support the Danish Ministry of Foreign Affairs reserves the right to carry out evaluation in accordance with this article.

4.6 Summary of risk analysis and risk response

The Institutional risks of DEPP III are that the reputations of DEA, MCEU, and the Ministry of Foreign Affairs (MFA) are damaged because the programme fails to deliver its outcomes; or unrealistic expectations from Danish private sector are not met; or, that programme activities become associated with fraud, corruption or human rights violations. In South Africa given that the support comprises mainly technical assistance and that programme design takes the partner demands for support and exposure to commercial opportunities into account, these are unlikely. Since the budget is in control of the DEA, mainly allocated for TA provision from Denmark, the potential for misuse of funds or attribution of improperly safeguarded development to the programme will be insignificant and residual risk is minor.

Programmatic risks to DEPP III relate to the possibilities that, due to economic dislocations, consequences of the Covid-19 pandemic, internal financial disruption, or simply due political realignment, government development priorities change, and therefore political commitment to low carbon development is reduced, or the ability of partners to devote resources to programme activities is impeded. In South Africa, such risks include that the restructuring of Eskom will be delayed or that political interests in the coal industry delay the changes needed to allow expansion of renewable energy integration. However, high level engagement at strategic level and the immediate tangible benefits of providing flexibility in the power system, increasing security of supply and therefore reducing load-shedding, will reduce this risk.

The South African economy has been plagued by structural challenges and weak growth since the global financial crisis of 2008. The risk for economic distortion will have high influence on sectors such as tourism which is an important contributor to foreign exchange income. In the energy sector Eskom has massive external debts and is on the verge of bankruptcy. Added to this is the repercussions of the Covid-19 crisis that further prohibit economic growth. Initially the low economic growth will reduce the pressure on Eskom to provide electricity, but at the same time limit the possibilities to make the changes needed. It remains uncertain to what extent Eskom will be capable of addressing the changes needed and find a new business model that will work with increasing maintenance costs and slow growth rates.

The political commitment to the energy transition is sometimes vague but they have has submitted NDC with moderate ambitions, to be revised by 2020. The government is not always completely

consistent in its approach. On the one hand promoting renewale energy sources but at the same time reaffirming its commitment to nuclear or coal energy. Development policy and power sector planning both support increasing the share of renewable energy in the power sector. These commitments have emerged after long internal political struggles, however. Powerful lobbies within and outside government still believe that South Africa would be best served by maximising the use of its substantial coal reserves. They are also concerned to preserve the jobs of approximately 80,000 employees in the coal mining sector.

A risk is that the government because of reorganisation, in the face of internal political pressure, will want to re-examine the long-term sustainability benefits of low-carbon energy and may seek short-term economic gains from extending the use of coal. Although, even after mitigation, this remains a major risk, the powerful technical, economic and political arguments in favour of low-carbon pathways are likely to win out in the longer term.

The Covid-19 pandemic will impact the programme and the country as a whole. There is a risk that travels will continued to be restricted which can have a negative impact on the programme activities if sustained under a long period of time. This is also the case in terms of the economy in general and therefore the willingness to invest in renewable energy sources as a whole.

5 Overview of management setup

The management set-up will be kept as simple and lean as possible. It will consist of a strategic level and an operational level to ensure efficient accountability mechanism for progress and results as well as an effective mechanism for giving strategic directions to the programme. The implementation manual of DEPP II will be adjusted to the new phase and serve as a management guideline under DEPP III.

An Implementation Group for each Development Engagement will manage daily implementation of the annual work programmes and will consist of focal points from the partner institution, DEA, the relevant LTA and RDE. The Implementation Groups will guide daily implementation and meet on a needs basis, and will: i) develop annual work programmes and progress reports for the Development Engagements , matching priorities in the partners work programmes, ii) associated with the detailed work programmes determine need for Technical Assistance (TA) inputs from DEA experts, LTA and from national and international consultants through development of a TA provision plan; iii) endorse inputs based on TOR prepared at output level; iv) monitor day-to-day progress of Development Engagements implementation. The Implementation Groups report on Development Engagements to the Steering Committee.

A Steering Committee is established and anticipated to meet once to twice per year and is a forum for high level policy dialogue in addition to setting direction for programme implementation. The Steering Committee will be co-chaired by a Director General of DMRE and the Danish Ambassador to South Africa and include a representative from Danish Energy Agency and heads/deputy heads of departments for the Development Engagement partner institutions. Its main task will be to approve annual work programmes, budgets and reports, and review annual progress. The Steering Committee should provide strategic guidance to the Partnership Programme, encourage cross-fertilisation and discuss and resolve issues related to programming progress and decide on any reallocation between the Development Engagements. Decisions are made by consensus with a silent procedure in place to mitigate risks associated with non-attendance.

A Secretariat to the Steering Committee headed by the DMRE Division Chief, the DEA country team leader and Senior Programme Officer RDE will be established to coordinate inputs from the Implementation Groups and ensure quality assurance of materials (e.g. work programmes and progress reports) submitted to the Steering Committee and facilitate decision making processes and resolving issues during programme implementation.

5.1 Principles for division of tasks between LTA and relevant posted staff

The sector/embassy advisor will be the embassy contact person to the DEA and the LTA's under the DEPP programme administered by the DEA. The cooperation and division of labour is defined as:

Long Term Advisor:

- Advice the partners of the programme on its implementation
- Technical advisory and development of capacity for Eskom corporate strategy and other partners as required and feasible on the areas covered by the programme
- Contribute to the strengthening of the partners capacity to facilitate and develop national and sub-national policies, strategies, regulatory frameworks and action plans within the areas covered by the programme in support of South Africa´s contribution under the Paris agreement
- Identify the partners specific needs for technical assistance and facilitate the relevant assistance from DEA experts
- Promote close coordination and communication between partner organisations, including the facilitation of status meetings, progress reporting and planning of new activities
- In collaboration with the DEA and partners provide input to the development of work programmes and development of progress reports
- Prepare and participate in programme missions to South Africa and study tours to Denmark
- Disseminate programme activities and results to relevant stakeholders, including through presentations at relevant events in the energy sector in South Africa, Denmark and elsewhere as relevant to the purpose of the programme (shared task with embassy advisor)
- Support the development of Terms of References for technical assistance, including the selection of consultants and subsequent evaluation of their performance
- Plan and prepare workshops and events in collaboration with the partners

- Keep abreast of the South African energy sector developments and establish and personal network with other development agencies and civil society organisations
- Give input to political dialogues that are relevant to the partners and the DEPP programme in general, incl. production of political briefs and memo's as required by the partners

Sector counsellors /embassy:

- Participate in the professional dialogue with the DEA, LTA and local partner authorities concerning the progression of the DEPP programme
- Disseminate programme activities and results, including involving stakeholders, give presentations at relevant events in the South Africa, Denmark and elsewhere (shared task with the LTA)
- Support the programmes SEC by actively explore opportunities for dialogues/synergies with Danish private sector, South African civil society organisations, multilateral organisations, such as OECD, IRENA and IEA and research organisations, Furthermore, within the framework of the programme, proactively increase the activities and dialogue towards, for instance, Department for the Environment, Forestry and Fisheries and the South African parliament
- Participate in activities related to the sector as an extension of DEPP, including dialogue with the EU, multilateral organisations and bilateral partners
- Support climate diplomacy, SDG-7 and policy dialogue. Through climate diplomacy and other foreign policy initiatives contribute to the translation of the technical cooperation to policy dialogue and increased NDC objectives and climate policy objectives
- Act as link between the technical cooperation and export promotion (MFA/Trade Council)
- Facilitate seminars, roundtable meetings, ministerial and other high-level visits from Denmark to South Africa and vice-versa including relevant high-level meetings in international for a.

6 Programme outcome budget

Annual programme budget per development engagement

	2020	2021	2022	2023	2024	2025	**Total**
Development Engagement 1: Capacity Development on Modelling and Procurement of Independent Power Production	268,225	1,609,350	1,609,350	1,609,350	1,609,350	1,341,125	**8,046,750**
Development Engagement 2: Capacity Development within Eskom on strategy and planning	375,515	3,653,090	3,653,090	3,653,090	3,653,090	3,277,575	**18,265,450**
Development Engagement 3: Capacity Development for Renewable Energy Integration into the Power System	286,106	1,716,640	1,716,640	1,716,640	1,716,640	1,430,533	**12,874,800**
Total	**804,675**	**4,828,050**	**4,828,050**	**4,828,050**	**4,828,050**	**4,023,375**	**39,187,000**

Annexes

1) Annex 1: Context analysis
2) Annex 2: Partner assessment
3) Annex 3: Results framework at output level
4) Annex 4: Budget details at output level
5) Annex 5: Risk Management Matrix
6) Annex 6: Terms of Reference Long Term Advisor

Danish Ministry of Climate, Energy and Utilities (MCEU)

Country Programme Document

Danish Energy Partnership Programme III with Vietnam

2020 – 2025

Final

17 August 2020

Table of contents

Abbreviations

BAU – Business as Usual scenario

DKK – Danish Krone

DEA – Danish Energy Agency

DED – Development Engagement Document

DEPP – DEA Energy Partnership Programme (China, Mexico, South Africa, and Vietnam)

DOIT – Department of Industry and Trade

EE – Energy Efficiency

EESD – Energy Efficiency and Sustainable Development Department

EMP – Longterm Energy MasterPlan

EOR19 – Vietnam Energy Outlook Report 2019

ERAV – Electricity Regulatory Authority of Vietnam

EREA – Electricity and Renewable Energy Authority

GDP – Gross domestic product

GHG – Greenhouse gas

GIZ - Deutsche Gesellschaft für Internationale Zusammenarbeit

GtG – Government to Government

GW – Giga Watt

LEEC – Vietnamese Law on Energy Efficiency and Conservation

LTA – Long-Term Advisor

MCEU – Danish Ministry of Climate, Energy and Utilities

MFA – Ministry of Foreign Affairs of Denmark

MOIT – Ministry of Industry and Trade

MTR – Mid-Term Review

NDC – Nationally Determined Contribution

NLDC – National Load Dispatch Centre

OECD-DAC – Organisation for Economic Co-operation and Development – Development Assistance Committee

PDP – Power Development Plan

RDE – Royal Danish Embassy

RE – Renewable Energy

SDG – Sustainable Development Goal

SMART – Specific, Measurable, Achievable, Relevant and Time-bound.

TOE – Tons of Oil Equivalent

TSO – Transmission System Operator

USD – United States Dollars

VRE – Variable Renewable Energy

1. Introduction

Vietnam has a population of approximately 96.2 million with a population density of 290 persons /km2. Vietnam is the 45th largest economy in the world with an annual growth rate of 7% and a GDP (Gross Domestic Product) of USD (United States Dollars) 2,564 per capita. 2% of its population lives below poverty line (the USD 1.9 per person per day poverty line). According to World Resources Institute's CAIT Climate Data Explorer, Vietnam is the 33rd largest greenhouse gas emitter in the world.

The Vietnamese mainland has 3,260 km of coastline the sea of the southern and south-central regions are considered one of the areas in Asia with the greatest potential for producing offshore wind energy.

Urban air pollution is critical in Vietnam and Hanoi is recently ranked as the most air polluted city in the world. Recognizing the global and local benefits of lowered carbon emissions and pollution abatement, Vietnam has put in place strategies and policies to advance green growth. The Government is aware of the need to lower the environmental footprint of the country's growth, to effectively mitigate and adapt to climate change, and that addressing these challenges also present opportunities to contribute to growth. As part of Vietnam's Nationally Determined Contribution (NDC) to the Paris Agreement in 2015, Vietnam committed unconditionally to an 8% reduction in greenhouse gas emissions by 2030 and a conditional reduction of 25%, depending on the level of international assistance.

Denmark is uniquely positioned to assist Vietnam to achieve these goals and even to increase the level of ambition. The Danish energy model is based on 40 years of transition and ambitious policy targets on renewable energy and energy efficiency and a proven, flexible energy system. Denmark has demonstrated that it is possible to combine economic growth with a parallel reduction of greenhouse gas (GHG) emissions and energy consumption. As a result, the Danish energy system has been adjudged the best in the world and the recent in-depth review of the Danish system by the IEA confirmed that Denmark has managed to green the energy system cost-effectively while keeping a safe and reliable energy supply.

Since 2012 the Danish Energy Agency (DEA) has been offering support covering a range of Denmark's experience from more than four decades of green energy transformation, and DEA now has a dedicated department for international activities from where it manages collaboration with 16 countries. The energy and climate cooperation with China, Vietnam, South Africa and Mexico was grouped into the Danish Energy Agency Energy Partnership Programme (DEPP I) in 2012. These are emerging economies and important players in the global energy landscape, representing almost one third of GHG emissions. Each of the countries had forecasted significant increases in energy consumption, and were facing key, strategic energy-related choices that would determine their energy future for decades to come. All countries have presented strategies and policies to reach ambitious climate and energy targets.

Prior to DEPP II, DEA shared Danish experiences with China, Vietnam, South Africa and Mexico as contributions to separate bilateral programmes. The government-to-government (GtG) modality was further introduced, consolidated and improved under DEPP II. The GtG modality has DEA as the primary driver for implementing a programme that is structured around sharing of long-established DEA expertise and knowledge and development of technical, legal and policy instruments in close collaboration with partners.

The refined GtG modality now features: a GtG Agreement outlining shared government goals for the cooperation; provision of technical advisory support offering counterparts wider access to Danish experience, expertise and technology solutions; continuous in-country presence through Long-Term Advisors (LTAs) with key-partner institutions; and, wider anchoring of programme objectives and results through high-level participation of both countries in programme steering and high-level policy dialogues facilitated by the Royal Danish Embassy (RDE).

The GtG modality has also proven successful in facilitating policy dialogue between Denmark and Vietnam at ministerial level, at National Assembly level, at Polit Bureau level and in promoting climate diplomacy and operational ties between Vietnamese line ministries and Danish Ministry of Climate, Energy and Utilities and DEA in support of the efforts to achieve global climate change mitigation.

In Vietnam, Programme Management includes clear institutional structures based on a high-level steering committee hosted by vice-minister of Ministry of Industry and Trade (MOIT) and the Danish Ambassador to Vietnam.

2. Strategic considerations

In 2013, Vietnam and Denmark entered a long-term strategic partnership and cooperation agreement for the purpose of strengthening Vietnam's transition to a low-carbon economy.

Vietnam is among the transition and growth economies identified in the Danish Development Policy and Humanitarian Strategy, "The World in 2030" as being of paramount importance to achieving the Sustainable Development Goals (SDGs). In line with "The World 2030" the overall strategic objective of DEPP III will be achieved through GtG Cooperation in a partnership between equals, with peer-to-peer institutional exchange of experience at both policy and operational level. In Vietnam, the cooperation ranges from high-level policy dialogue promoting low-carbon economic development to technical support focusing on enabling frameworks and solutions for renewable energy and energy efficiency. This provide opportunities to showcase Danish experience from the energy sector and contributes to the Danish lead of the SDG 7 and to Danish Embassy in Hanoi as climate front post.

In accordance with the objective and principles of the Climate Envelope, priority in DEPP III will be given to interventions, where a transformational and sustainable shift from coal to renewable energy and increased energy efficiency can be achieved through enhanced policy frameworks and market structures in partner countries. Interventions will be delivered within four thematic areas where DEA has extensive competence and a comparative advantage over most other leading energy authorities. The four thematic areas adapted to a Vietnamese context are:

- Long-term energy modelling and planning
- Enhanced framework conditions for renewable energy, including offshore wind
- Integration of renewable energy and flexibility of the power sector
- Energy efficiency in the industrial sector

DEPP III will strengthen the partner countries in their global commitments on clean energy and climate through enhanced policy outreach and engagement with policy makers. Interventions with policy makers will be pursued as a complementary effort to the technical engagement with partners on renewable energy and energy efficiency. Interventions at both policy and technical level will promote a coherent and evidence-based framework for long-term decision making on low-carbon energy and climate.

Based on this the DEPP III's overall strategic objective is defined as:

> *The partnership countries achieve low carbon development, implement the Paris Agreement on Climate Change and continue upscaling and realising their NDC goals.*

Based on this the DEPP III's country objective for Vietnam is defined as:

> *Vietnam develops low carbon pathways related to energy in support of their NDC and Vietnam upscales NDC mitigation targets and related measures by 2025.*

DEPP III in Vietnam will continue with all three partnerships established under DEPP II. Vietnam is now ready for raising the level of ambitions on NDCs and DEPP III will support this effort, especially developing the Vietnamese Energy Outlook Report providing substantial input to the Vietnamese Power Development Plan (PDP) and Longterm Energy MasterPlan (EMP). DEPP III in Vietnam will also put more emphasis on integration of renewable electricity especially from offshore wind and energy efficiency in the industrial sector at provincial level and develop an ambitious incentive scheme for energy efficiency.

Most of the DEPP III will be devoted to helping increase the amount of renewable energy used in electricity supplies and improve energy efficiency in the industrial sector. The significance of this is underlined by the United Nations Environment Programme GAP report from 2019 identifying "*Renewable energy electricity expansion*" as the sector with greatest GHG reduction potential and point at actions to plan for large shares of variable renewable energy; development of flexibility measures to take on larger shares of variable renewable energy in replacement of coal, and; support for deployment of distributed energy; and an IEA report from 2019 highlights that *Energy efficiency calls for bold action by policy makers and investors*.

Box 1: Government to Government Cooperation as an effective tool of capacity development.

- The DEA is responsible for creating a well-informed and evidence based environment for policy decision making for Denmark to meet the climate mitigation targets of the Danish Climate Act within the energy sector. The DEA is also responsible for formulation and implementation of energy related policies and regulation in Denmark.
- The DEA encompasses four decades of experience for promoting green growth by securing evidence based decision making, formulation of policies and regulatory frameworks as well implementation of policies and regulation for the energy sector.
- DEPP III rests on the shoulders of a well-tested GtG modality for sharing valuable Danish competences on low carbon development and how to combine economic growth while reducing GHG emissions.
- DEA contains unique and hands-on experience for securing frontier levels of energy efficiency, long-term energy planning, favourable framework conditions for renewable energy, and integrating variable renewable energy and security of supply. To a large extent, these experiences are only available to DEPP III partner countries via the GtG modality as other development partners and consultancies do not hold such information.
- DEPP III provides access for partner countries to learn from Danish experiences through a peer-to-peer modality. The direct exchange between partner line ministries/agencies and DEA is to a large degree unrivalled and not provided by other development actors in the partner countries.
- The GtG modality and the DEA as representatives of the Danish central government provides high level of credibility and access to high-level decision makers in the partner countries. Recognised high

DEPP III in Vietnam will be posting two LTAs at partner institutions under MOIT. LTAs have proven to be a critical element of the most successful interventions for capacity development under DEPP II. The LTAs deliver technical capacity to partner's organisations and contribute to fruitful and trust-based relationship between the partners and DEA. In addition to technical outputs and deliverables, the LTAs ensure that the programme support is well anchored and sustained within the partner institutions. Among other responsibilities, the LTAs will ensure that DEPP III activities match the needs and priorities of the partner institution. Based on these features, DEPP III will enhance and increase the capacity of the LTA function from one LTA under DEPP II to two LTAs under DEPP III.

A strategic dimension of the DEPP II and DEPP III is the support to off-shore wind energy. The Danish Energy Agency and the Electricity and Renewable Energy Authority of Vietnam (EREA) are currently preparing the input to a roadmap for offshore wind. The input to the roadmap consolidates the quantitative findings of the background analyses carried out - resource mapping and site selection,

cost estimation and transmission grid analysis, among others - and supplements them with regulatory, consent and permitting, support scheme, supply chain and other critical elements to arrive at a set of recommendations aimed at kick-starting a successful offshore wind industry in Vietnam. Preliminary findings emphasise that Vietnam has a technical potential of 160 Giga Watt (GW) offshore wind capacity. There is currently intense activity in the Vietnamese wind market, which aims for up to 6 GW by 2030, which is the goal of the national government. Just recently the Danish developer Copenhagen Infrastructure Partners secured a deal to develop the 3.5 GW "La Gan" offshore wind project in Vietnam with local partners. The project is expected to cost up to Danish Krone (DKK) 65 billion. DEPP III will continue to support Vietnamese authorities to develop their capacity to lead and manage offshore wind development and roll-out.

In addition to climate change mitigation, the DEPP III programme in Vietnam will include tangible contributions as well as co-benefits to sustainable development such as improved environmental conditions and health in large cities. The programme will also provide support for SDG 7 and SDG 13. Please see a description of sustainable development aspects and linkages to SDGs in section 4.4.

DEPP III will also support the Energy Sector Counsellor to inform and leverage the policy dialogue in Vietnam where RDE has been appointed as climate front line mission to promote the Danish Government's climate ambitions and solutions worldwide. To enhance the linkage between technical assistance and climate/economic diplomacy DEPP III is intended to serve as an operational mechanism to support this frontier position.

2.1 Strategic engagement and cooperation

Experience from the previous DEPP programmes has shown that although there are clear and demonstrable pathways to achieve cost-effective transition of the energy sector in parallel with enhanced economic growth, there are additional opportunities to make an incremental strategic push in direction of low carbon development in each DEPP III country by supporting DEPP III non-core partners. Therefore, to complement support to DEPP III partnerships, 6% of the DEPP III budget (DKK 15 million) is unallocated, reserved for Strategic Engagement and Cooperation (SEC) eligible for all four countries and aimed for activities with non-core partners.

The purpose of SEC is to support an enabling environment for informed decision making, policy dialogue, climate diplomacy and ultimately transformational change towards low carbon development of the energy sector by entering into new partnerships with civil society, the private sector actors, academia and multilateral organisations, and other complementary parties.

The approach is to strengthen participation in the discussion and information exchange around the low carbon energy development agenda in a variety of public forums through cooperation with technical and non-technical stakeholders, outside the core circle of existing partners. To support such activities,

SEC funds are available at programme level to support SEC activities in the countries or regionally, in addition to the main DEPP III support through the established development engagements.

The SEC support contributes to achieving the strategic objective of DEPP III through the following overall outcome:

Low-carbon pathways, cost efficient NDC implementation and upscaling of NDC targets within the energy sector are enabled based on collaboration, exchange of information and awareness raising with non-core partners focusing on energy and climate change mitigation topics.

The indicator for SEC is defined as number of strategic engagements with civil society, the private sector, academia and multilateral organisations conducted to support low carbon development, NDC implementation and upscaling of NDC targets in the country.

Based on the above outcome and indicator, SEC improves the enabling environment for technical and policy development on energy and climate change mitigation topics which will support accelerated implementation of current NDC targets and upscaling of future NDC targets. Due to the uniform focus on low carbon pathways, cost efficient NDC implementation and upscaling of NDC targets, the SEC outcome and activities with DEPP III non-core partners will contribute to the overall strategic objective and country objectives of DEPP III.

Themes to be supported by SEC may fall within the following areas of engagement:

- Enhanced policy dialogue and climate diplomacy on energy and climate change mitigation
- Enhanced cooperation and coordination with multilateral organisations, particularly Danish funded multilateral initiatives engaged in low carbon development in the partner countries
- Interaction with civil society regarding climate change mitigation, Just Transition, gender equality, public outreach and advocacy for low carbon development
- Support framework conditions for private sector engagement in support of the Paris Agreement, and SDG 7 and 13
- Enhanced cooperation with financial organisations to promote an enabling environment for investments in renewable energy and other areas in support of low carbon development in the partner country
- Increased cooperation and coordination with academia
- Increased south-to-south cooperation between DEPP III partners and other relevant actors

Identification of relevant themes will be a joint process between the RDE in Vietnam, the LTAs and the DEA. Formulation of specific work streams will be done in a joint process with DEA and the identified partner and opportunities to involve DEPP III partners will be explored.

An example of a relevant and potential SEC activity in Vietnam could be a collaboration with NGOs (WWF, GreenID etc.) to arrange joint events/conferences/workshops at provincial level to disseminate results from the EORs and discuss how the green transition in Vietnam can be supported and strengthened from a grass-root level engaging provinces more directly in renewable energy and energy efficiency projects. The organizations each have their own take and approach to energy and climate, but almost unanimously say that they sense that the Vietnamese government has become more responsive to the green agenda and that they have easier access to high-level decision-makers. At the same time, there has been a great deal of recognition of the work with EOR19, and recognize that DEPP in Vietnam has succeeded in being in contact with many different actors and thus gaining a lot of attention and support from stakeholders.

3. Justification for programme design

3.1 National sector development priorities and challenges

Vietnam's nationally determined contributions (NDC) includes a mitigation and an adaptation component. The mitigation component includes both unconditional and conditional contributions. The unconditional contributions are measures that will be implemented using domestic resources, while the conditional contributions are measures that could be implemented if new and additional international financial support, technology transfer and capacity building are received. Vietnam's NDC identifies the GHG reduction pathway in the 2021-2030 period. With domestic resources GHG emissions will be reduced by 8% by 2030 compared to the Business as Usual scenario (BAU). The above-mentioned contribution could be increased up to 25% with international support.

Vietnam's NDC has the Ministry of Natural Resources and Environment (MONROE) as focal point to the United Nations Framework Convention on Climate Change (UNFCCC) and has been developed with the participation and contributions from different line ministries, non-governmental organisations, research institutions, business sector representatives as well as international development partners.

Box 2: The BAU and contributions in the Vietnamese NDC

BAU:

Vietnam's BAU scenario for GHG emissions was developed based on the assumption of economic growth in the absence of climate change policies. The BAU starts from 2010 (the latest year of the national GHG inventory) and includes the energy, agriculture, waste and Land Use, Land-Use Change and Forestry (LULUCF) sectors.

- GHG emissions in 2010: 246.8 million tCO2e
- Projections for 2020 and 2030 (not included industrial processes):
  - 2020: 474.1 million tCO2e
  - 2030: 787.4 million tCO2e

Unconditional contribution:

With domestic resources, by 2030 Vietnam will reduce GHG emissions by 8% compared to BAU, in which:

Vietnam recently announced its new NDC 2020 with commitment to unilaterally cut emissions until 2030 to 9% below 2014 national business-as-usual level and to 27% upon international assistance. Though it sounds more progressive than the former one, the new commitment shows limited ambition.

The new commitment refers to the 2014 base year instead of year 2010 in its first NDC when Vietnam committed to reduce 8-25% emissions equivalent to 62.7 – 198.2 MtCO2e respectively.

There is a slight increase in the new commitment with the absolute target for emissions reduction is of 9-25% and the absolute CO2 reduction volume ranges from 83.9 – 250.8 MtCO2e. These figures show that focus until 2030 will be on reducing country's GHG intensity.

The Government of Vietnam has several key policies for sustainable energy development with four main pillars: Energy efficiency, renewable energy, energy market and climate change.

The current main policies for shaping the future energy development in Vietnam comprise:

- Law on Energy Efficiency and Conservation: promoting energy efficiency and conservation activities through regulations, standards and incentives.

- Electricity Law and Amendment of Electricity Law: prescribing the electricity development planning and investment; electricity saving; electricity markets and others.

- Vietnam Green Growth Strategy: introducing GHG reduction targets aiming to reducing fossil fuel and promoting renewable energy.

- Law on Environment Protection: promoting clean and renewable energy; environmental protection fee; environmental protection fund; strategic environmental assessment.

- Renewable Energy Development Strategy: setting renewable energy (RE) targets in energy and power sectors; supporting schemes for renewable energy development (e.g. feed-in tariff, net-metering etc.).

- National Program on Energy Efficiency and Conservation for the period 2019-2030: setting targets for reducing the final energy consumption compared to a business-as-usual baseline.

- Intended Nationally Determined Contributions: submitted to the Secretariat of the UNFCCC.

- The revised National Power Development Plan in the period 2016-2020 with the orientation to 2030 (revised PDP7): reducing the amount of coal power plants compared to PDP7, enhancing security and implementing innovations for new power plants.

Energy use in Vietnam is accelerating and the energy intensity of the economy is among the highest in the world. Vietnam's GHG-emissions almost tripled and its carbon intensity increased by 48% in the period from 2000 to 2010, resulting in the second highest carbon intensity in the region after China. The current PDP 7 predicts that, if current trends and policies remain unchanged, the share of coal for power will rise from 17% in 2010 to 53% by 2030. Electricity demand in Vietnam is expected to grow by about 10 percent annually to 2030, from 39 GW to 120 GW. Vietnam has recently become a net importer of coal, oil reserves are being depleted and are expected to drop significantly in the next five years and natural gas production has peaked, such that Vietnam will need to start importing liquid natural gas (LNG) in 2023.

Vietnam's vision is to reduce reliance on fossil fuel and encouraging the exploitation and use of renewable and low GHG emission energy sources, with emphasis on solar and offshore wind. The wider climate change and green growth policies are reinforced by the National Climate Change Action Plan and the National Green Growth Action Plan. The Renewable Energy Development Strategy sets overall renewable energy targets of increase of total production and use of renewable energy sources

from approximately 25 million tons of oil equivalent (TOE) in 2015 to 37 million TOE in 2020 and 62 million TOE in 2030.

The revised version of PDP 7 prioritises the development of renewable energy sources for electricity production; increasing the proportion of electricity generated from renewable energy sources up to around 7% in 2020 and above 10% in 2030. A PDP 8 is under development with even higher ambitions.

The Government of Vietnam is very aware of their problems of increasing import dependence on energy, rising coal consumption, rising CO_2 emissions, lack of electricity capacity, inability to integrate renewable energy, air pollution in major cities, and the potential benefits of energy efficiency.

Vietnam is interested in learning from the Danish experience and committed to change, as they have seen from DEPP I and DEPP II that the GtG cooperation with DEA leads to tangible results in terms of capacity and policy development.

Long term energy modelling and planning is an essential part of this assistance in identifying and prioritising the most cost-efficient pathways to achieving the NDC targets within the energy sector. One of the DEPP II key components, namely energy modelling, with the publication of the EOR19, developed scenarios showing how the Vietnamese energy sector can evolve in a greener and more cost-effective direction. There is a widespread recognition that EOR19 is a key instrument in the country's future energy planning and therefore provides input to both the Communist Party's resolution for energy policy development, the forthcoming Power Development Plan 8 in 2020 and the upcoming Energy Master Plan.

Box 3: Vietnamese Energy Outlook Report – elevated policy dialogue and extensive capacity development

The Vietnamese Energy Outlook Report (EOR), developed through the partnership between DEA and the Vietnamese MOIT under DEPP II, presents the future Vietnamese energy system towards 2050, through various scenarios that include highly ambitious and sustainable development pathways in comparison with business-as-usual, and display consequences for air pollution and reliance on coal and oil import. Scenarios demonstrate how Vietnam can raise their NDC ambitions, which has led to a series of recommendations that include possibilities of large-scale RE integration and energy efficiency savings.

The EOR was, through the partnership, published first time in 2017 and second time in 2019 with substantial media coverage. The recommendations in 2019 were presented to and discussed with high ranking decision-policy makers in Vietnam, including with the Chairman of the Central Economic Commission and the Chairman of the Commission for Science, Technology and Environment of the National Assembly. Results and recommendations from the EOR19 have been used directly in preparing the Power Development Plan 8 for Vietnam – a legal binding document for Vietnam's power system 2021 – 2030 with a vision towards 2045. In February 2020, Vietnam's Politburo released Resolution 55, which outlines RE targets and guidelines for the development of the energy sector. A comparison with the EOR19 shows that Resolution 55 "inherited" several important recommendations from the EOR19, which in turn underlines the impact DEPP has in Vietnam.

The DEA-MOIT partnership, with peer-to-peer twinning and collaboration has been essential for development of the EOR, where DEA has contributed with extensive capacity development through training, technical dialogue and stakeholder consultation workshop, which has developed MOITs buy-in and ownership of the process and final product.

Capacity development of the Vietnamese partners in the free source computer model – Balmorel model, developed with Danish researchers – has been essential in analysing the extensive data that has been collected. A number of technical background reports have been produced to ensure the most reliable inputs. These include Vietnam Technology Catalogue; Fuel Price Projections; TIMES Data Report; Balmorel Data Report, and; Grid Modelling Report. Data presented in the EOR is based on extensive data collection, consultations and involvement of Vietnamese stakeholders and experts.

Denmark is a front runner on climate mitigation with one of the world's most ambitious climate laws, and DEA possess specials skills that are unique in assisting the partner countries in enhancing framework conditions for renewable energy electricity expansions as the intervention area with the greatest GHG reduction potential. As a consequence of limited enabling framework conditions in Vietnam, the price of renewable energy is significantly higher than in the EU. Denmark's support to improving the framework conditions for offshore wind energy is a vital driver to unlock the commercial potential for renewable energy and will establish a level playing fields in bidding for renewable energy concessions, which will enable fair competition where also Danish developers and power producers can participate.

Larger flexibility in the power system, including better forecasting with higher and smarter integration of renewable energy is an important avenue to a low carbon pathway. Through Denmark's Systems Operator (Energinet, an independent entity under the Danish Ministry of Climate Energy and Utility (MCEU)) Vietnam will get unique access to experts that can assist the national Systems Operation in optimizing renewable energy integration.

Limited flexibility in thermal power production and limited capacity to do forecasting of electricity production from solar and wind is also a constraint in the integration of renewable energy. This leads to significant curtailment (loss) of renewable energy and results in unnecessary release of CO_2 and significant loss of income for both government and private sector.

Energy efficiency is considered "first fuel" – a source of energy in its own right and much cheaper than investments in more complex and costly energy sources. According to IEA the demand for energy efficiency is growing and faster action on efficiency is both essential and achievable. Denmark has vast experience in energy efficiency and Danish experience suggests that a holistic set of policies – from incentives to regulation – sets out a clear trajectory and gives strong signals to the market. Denmark also possesses significant technical solutions from many years working in energy efficiency.

But, also Denmark will benefit from the support on several fronts. DEA's participation in development of more advanced energy and climate policy frameworks in several countries bring back valuable knowledge and inspiration for energy and climate policy frameworks in Denmark. And, often policy choices reflect differences in local circumstances, and the right solutions are those that fit with local conditions. This increases DEAs experience that may be utilized in Danish policy development.

DEA's close relationship with energy institutions in Vietnam can be leveraged in Denmark's policy dialogue with partners. DEPP III will provide easier access to several important decision makers for the RDE in Hanoi, now being a climate front post.

3.2 OECD-DAC quality criteria

The Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) has laid out six[8] evaluation criteria (relevance, effectiveness, efficiency, impact, coherence and sustainability) which have come to serve as the core reference for evaluating international cooperation projects and programmes. The DEPP III objective in Vietnam is that the country develops a sustainable and low carbon energy mix in accordance with its NDC targets, which will enable it to upscale NDC targets by 2025. This will be achieved through three development engagements that have been designed in close collaboration with partners to meet DAC criteria, i.e. to ensure that: all interventions should be relevant to the context, achieve their objectives, deliver results in an efficient way, and have positive impacts that last.

Relevance, the extent to which the activity is suited to the priorities and policies of the target group, recipient and donor: Vietnam's National Climate Change Action Plan and the National Green Growth Action Plan present a vision of reduced reliance on fossil fuel and increased use of renewable and low GHG emission energy sources, with emphasis on solar and offshore wind. In this context, the

[8] In 2019 one major new criterion – coherence – was added to better capture linkages, systems thinking, partnership dynamics, and complexity.

Government of Vietnam is very aware of their problems of increasing import dependence on energy, rising coal consumption, rising CO_2 emissions, lack of electricity capacity, inability to integrate RE, air pollution in major cities, and the potential benefits of energy efficiency. The DEPP III and its Development Engagements are aligned to these Vietnamese Government policy objectives including its commitment to meeting its NDC targets and its focus on providing clean, affordable energy to all of its citizens and its strategic shift to renewable energy. Development Engagement 1 will consolidate and extend the work undertaken by DEPP II, using the EOR to show how increasing shares of renewable energy are cost-effective alternatives to meeting the Vietnamese NDCs while ensuring national security of supply. Development Engagement1 will promote greater flexibility in the power system, reducing losses of energy, increasing the security of the market and ultimately lower GHG emissions, reduce pollution and strengthen national energy security. Development Engagement 3 will consolidate the work of DEPP II by ensuring that the Energy Efficiency Law is effectively implemented. In this way, these Development Engagements target key Vietnamese Government priorities, assist policy formulation and extend the support from DEPP II into on the ground implementation. They also make detailed and validated information available to other national and international stakeholders, increasing transparency, accountability and coherence in the energy sector. Following on from the design criteria of DEPP III, these interventions are in areas where Denmark adds value in terms of national strengths and competence, in particular in relation to renewable energy and energy efficiency in energy planning, and the reform of policy frameworks. The inputs required from DEA are well aligned with its core competences and its overall objectives for DEPP III.

Coherence, the compatibility of the intervention with other interventions in a country, sector or institution: There is a need for coherence, so that the synergies (or trade-offs) between policy areas can be identified, particularly with regard to the climate emergency. The programme in Vietnam pays great attention to the need to achieve energy transition whilst maintaining economic growth and impacting other priorities such as public health benefits of reduced air pollution, energy security and employment opportunities. By producing Energy Outlook reports, Development Engagement 1 facilitates the informed involvement of stakeholders, the general public and policy makers in a wider policy dialogues on energy sector planning. Development Engagement 2 helps national and regional planners and private sector investors to coordinate and optimise their management of power supply and Development Engagement 3 assists industrial regulators and operators to implement energy efficiency (EE) regimes. Thus, DEPP III addresses interlinkages between national progress to lower-carbon power systems and activities carried out by the other government institutions in the sector (so-called "internal coherence") as well as complementarity, and co-ordination with other Development Partners such as Asian Development Bank, World Bank, United States Agency for International Development, Japan International Cooperation Agency, and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), and avoiding duplication of effort ("external coherence"). Vietnam actively engages with other development partners on the topics of climate change mitigation, energy efficiency and clean energy development. DEPP III formulation included meetings with these agencies to identify areas of synergy and avoid risks of duplication. Donor coordination is primarily done though the Vietnam Energy Partnership Group secretariat in Vietnam, which was created as a knowledge sharing and coordination platform for all major donors and further donor coordination will be conducted via the two LTAs in the Vietnamese partner institutions and the Energy Sector Counsellor and the DEPP Programme Officer at the RDE in Hanoi.

Effectiveness, the extent to which an activity attains its objectives: Priority of the DEPP III is given to interventions where transformational change to renewable energy and energy planning can lead to cost-neutral or even financially advantageous changes to policies and market structures. Development Engagement1 will consolidate and extend the work undertaken by DEPP II and deepen Vietnamese planners' understanding of climate change drivers and concepts of externalities so that they can more effectively address climate change as part of the quantitative energy system modelling. This includes particularly changes to existing systems and structures where partners have already expressed the desire to implement reform, including in policy, plans and technological renewal.

Efficiency, the use of the least costly resources in order to achieve the desired results: The cooperation in Vietnam builds upon the relationships established in the DEPP programmes since 2012, ensuring that the approaches and methodologies are driven by partner demand, and have already been tested and deemed fit-for-purpose. This will ensure reduced establishment costs and economies of scale. The partnership approach where the technical advice on each assignment is directly paired with a peer partner in the institution of the Development Engagement have been expressed by partners to be the preferred option, because it, unlike other development partners support, generates flexibility, is tailor-made to the institutions specific needs and it provides direct input to the partner institutions mandates.

Impact, the effects on social, economic, environmental and other development indicators: Vietnam has been identified as a country with a very high potential for reduction of GHG emissions. If successfully implemented, DEPP III will lead to increasing shares of renewable energy, with more reliable and stable electricity supply from the grid. DEPP III has been developed specifically to consolidate and extend the work undertaken by DEPP II to strengthen energy efficiency regulation enforcement and compliance in industries at provincial level by helping to implement the Law on Energy Efficiency and Conservation. The impacts will make a contribution not only towards the global aim of limiting global temperature rise but would also help indirectly to generate more jobs and reduce poverty, reduce air pollution thereby contributing to public health, and improve governance with the opening up of policy formulation to public scrutiny through regional and national energy outlook reports.

4. Presentation of the programme

4.1 Justification of choice of partners and criteria used

DEPP III builds on the progress achieved and the lessons learned from DEPP II. It is therefore clearly advantageous to continue working with the same partners to benefit from previous knowledge of and working relationships with the partner and to consolidate the achievements. Key criteria for partner selection still apply, however. These include:

- Relevance of authority and mandate regarding energy and climate policy development
- Demand from relevant national sector leaders and from the agency itself for the competences and modality of cooperation offered by the Danish Energy Agency
- Mandates that directly address the key objectives of the DEPP III

- Capacity to engage in a cooperation programme at the ambition level agreed
- Ability to use the inputs to achieve the desired outcomes either directly or by influencing policy, planning or legislation
- Priority and need in relation to the DEPP objectives and the national context in which they operate
- Acceptable level of risk that the programme can be implemented and that the Theory of Change will be valid

DEA's primary collaborative authority in the DEPP II has been the Vietnamese MOIT. MOIT is the governmental agency responsible for state management of industry and trade including electricity, renewable energy, oil and gas and energy efficiency. The Development Engagements in Vietnam in DEPP II were with three organisations that operate under the umbrella of MOIT, namely, Electricity and Renewable Energy Authority (EREA), Electricity Regulatory Authority of Vietnam (ERAV) and the Energy Efficiency and Sustainable Development Department (EESD). One LTA has been operating out of MOIT for most of this period.

Partners' engagement and readiness to receive technical assistance is briefly explained below.

- EREA is responsible for overall planning of the Vietnamese energy system, including planning and approval renewable energy, including off-shore wind. Furthermore, EREA is responsible for developing the national PDP and EMP.
- ERAV is responsible for ensuring development of a competitive power market, renew and develop the power system regulations framework and responsible for developing and implementation of the road map for the power market reform in Vietnam. All areas are important to take into consideration, when applying the tools developed in the engagement to ensure that ERAV are able to make their own forecasting of renewable energy (e.g. solar and wind) utilizing information in daily operation and updated grid codes.
- EESD is responsible of the deliver the Vietnam Energy Efficiency Program 3 (VNEEP3), including national energy efficiency targets. Furthermore, EESD has to ensure that regulation is in place and after demonstrating the effects of the engagement at provincial level VNEEP can be rolled out nation-wide without further support.

Cooperation between the Danish and Vietnamese partners has been good, and both sides have expressed great satisfaction with the results so far. All the selection criteria continue to be met and no other candidates have been identified that could match the criteria or the objectives of DEPP III as well as do the current partners. Therefore, DEPP III will continue with the same development partners.

4.2 Integration of results and lessons learned from previous cooperation

The GtG modality for the cooperation is valuable and highly appreciated by the partners. The high level of continuity from the previous phases of collaboration has considerable advantages, and long-term technical cooperation can create possibilities for further bilateral relations. The demand-responsive approach, whereby DEA adjusts to changing political situations and urgent needs, was

confirmed by partners to be extremely important and increased the value of DEA's support. MFA sees DEPP III as a strategically important programme for Denmark and Vietnam, and as a platform to facilitate bilateral climate diplomacy.

It is too early to assess the outcome of DEPP II but there have been highly valuable outputs and indicators of long-term success including the following:

- An extremely valuable output was the EOR19. The report describes how Vietnam can meet the country's NDC in five detailed and data-rich scenarios. It further demonstrates that Vietnam can make its energy system cheaper and greener, saving up to 370 million tons of CO_2 annually by 2050. This corresponds to more than 10 times as much as Denmark's current annual emissions from the energy sector.
- The completion and publication of Vietnam's first technology catalogue. The Technology Catalogue contains high-quality data based on input from open consultations with energy sector stakeholders in Vietnam. Training seminars in modelling, data collection and validation, as well as the adaptation to the Vietnamese context, are used to prepare scenarios for long-term planning of the energy sector.
- The practical implementation of integrating renewable energy in the power grid with the advice from the Danish Transmission System Operator (TSO) Energinet. This direct twinning between ERAV/NLDC (National Load Dispatch Centre) and Energinet incl. expert-to-expert meetings in both at missions in Vietnam and at internships at Energinet in Denmark is a unique strength in the DEPP and will continue to provide value going forward.
- The Danish programme has also been instrumental to develop the capacity of the EESD on energy efficiency, to work with Departments of Industry and Trade (DOITs) to strengthen and comply with regulation in two provinces in the north and south as well as to work with large energy intensive industries to demonstrate the merits of conducting energy efficiency audits, establishing energy efficiency benchmarks and developing 1 year and 5 year Energy Efficiency Plans. Finally, the Danish support has assisted MOIT in implementing and enforcing the Law on Energy Efficiency and Conservation (LEEC) including development of administrative procedure and guidelines for DOITs and recommended specific changes in legal documents to improve the regulatory framework. DEPP III builds on the current phase with regard to development of incentives schemes for energy efficiency investments in large industries inspired by Danish regulatory experience.

The Mid-term review (MTR) of the DEPP II carried out in the spring of 2019 confirmed that DEPP II is a pertinent vehicle for facilitating long-lasting energy cooperation between Denmark and the partner countries. The MTR also found the programme highly relevant for partner countries' efforts to realise national policies and targets to reduce GHG emissions and to undertake a green energy transition. The MTR verified the technical focus areas as highly relevant to support further uptake of renewable energy in the countries.

The focus of DEA on its four thematic areas of cutting-edge expertise has been successful. MTR and national partners found the programme highly relevant in all countries. MTR also found that the inputs to national energy planning, improved framework conditions for renewable energy, integration of renewable energy and energy efficiency are highly relevant topics that facilitate a more efficient way of

reaching the politically determined energy transition targets in the countries. It also acknowledged that DEPP II efforts to enhance the ability of a partner to carry out successfully a particular task or function were considered a success by partners.

The MTR also made recommendations for improving the DEPP II programme and enhancing future cooperation in Vietnam, including the following:

- Consider a more refined approach to the LTA function in partner institutions
- Review the appropriate balance between in-house staff from DEA/Energinet and consultants.
- Simplify the management set up.
- Adopt a more systematic and consistent approach to capacity development.

To the extent possible, the recommendations from the MTR are currently being implemented under DEPP II and will be carried over to DEPP III. The review of capacity development in DEPP II has informed the formulation of DEPP III, and has influenced every aspect of DEPP III including the Theory of Change, the selection of partners; the formulation of the Development Engagements, the use of advisors; the results framework, the targets and indicators; the implementation manual and the reporting.

4.2.1 Approach to capacity development

DEPP III will, in its capacity development approach, make use of the following:

Preserve and Reinforce the Successful Elements of Capacity Development: The focus on transfer of knowledge will continue in DEPP III under the GtG modality. The successful tools and techniques adopted in DEPP II will be continued with an aim to strengthen the capacity of individuals and partner institutions to accommodate the partner's priorities for low carbon development. Tools and techniques include peer-to-peer exchange with partner institutions; twinning of national and Danish specialists; expert-to-expert on the job training; training courses; lectures from invited specialists; seminars that might include a wider range of stakeholders; joint provision of technical information, analytical studies, manuals and guidance; and, exposure of partners to new approaches through study tours and field visits. All tools and techniques will be contextualized to the partners needs and will cater for a wider institutionalization of the approach for capacity development.

More emphasis will be placed on techniques that may become more valuable in DEPP III. This includes exploring options for partner institutions to adopt and apply provided relevant tools or content as part of their internal procedures in order to promote self-driven capacity development within the institution. Also, tools and content for capacity development will to the extent possible be scalable and replicable whereby partner institutions can use it outside DEPP III.

Additionally, DEPP III will include more emphasis on policy dialogue aimed at reinforcing the enabling environment for transformation; awareness raising aimed at further policy outreach; knowledge management which ensures that learning, change and development are retained when staff move; research could be developed without much cost to the programme by networking with universities to contribute to dissemination of good practice and amplify the overall effectiveness of the programme; and, organisational strengthening where necessary to remove barriers to reform, and acceptable to the partner.

Formulation of capacity development activities: Capacity development activities will be formulated as part of the Terms of Reference (ToR) for each medium to long-term activity in direct collaboration with partners. ToRs will include particular attention to documenting the needs of the partner, clearly setting out the scope and objectives of the capacity development activities and reaffirming that indicators, set out in the Development Engagement Documents (DEDs) capture the capacity development aspect and are Specific, Measurable, Achievable, Relevant and Time-bound (SMART).

Sustainability of institutional capacity: Establishment of an enduring institutional capacity is designed into programme objectives and targets. The necessity of institutional development and the ways in which this can be assured will also be incorporated into implementation manuals, LTA ToRs, consultant ToRs, monitoring systems and dialogues during the Steering Committee meetings.

Reinforcement of reporting, monitoring, and evaluation: Capacity development interventions will be monitored against indicators as defined the DEDs. Applied indicators will ensure progress and internal quality control towards the objectives of these interventions. The MTR of DEPP III will assess the long-term sustainability of capacity within institutions and guide any required adjustments within the programme.

Applied ToRs for individual assignments under DEPP III will include SMART indicators addressing capacity development. The indicators and collected values will be applied to underpin the overall progress towards expected outputs and outcomes.

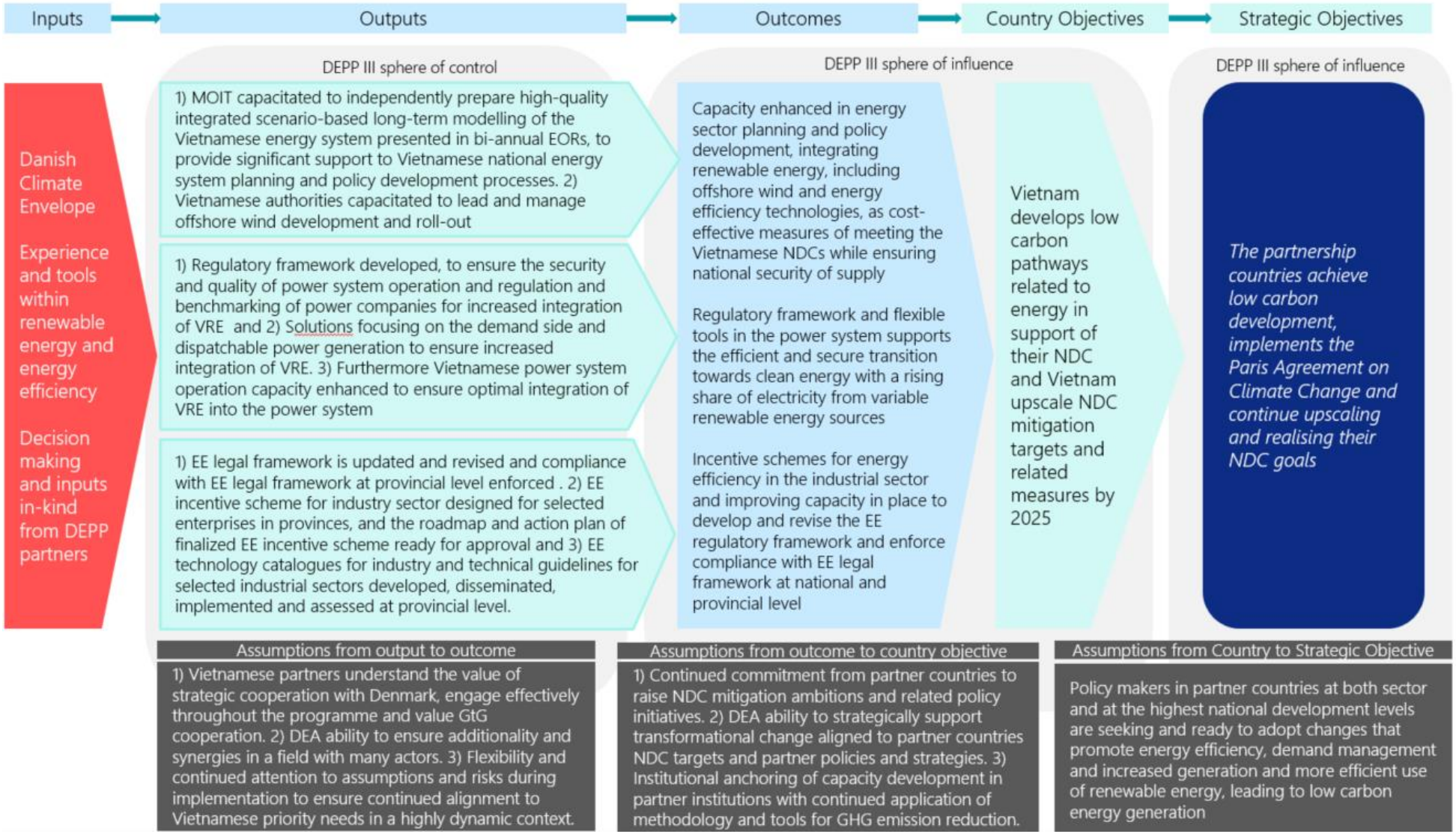
A narrative reporting on capacity development within each Development Engagement will be part of the reporting to the Advisory Group as part of standard reporting format. In addition, the DEPP III will explore options for reporting on capacity development as separate topic to the Steering Committees. The likely reactions of each national partner to receiving a separate section reporting on capacity development activities and impacts will be assessed by the Danish Embassy and DEA. The decision on whether to present this information to the Steering Committees will be determined on a case-by-case basis.

Use a greater range of technical assistance delivery mechanisms: The 5-year duration of DEPP III may give rise to opportunities to use techniques such as exposure events and the promotion of research to supplement core activities and to extend the influence and sustainability of the programme.

Use of external consultants for replicating tasks: DEPP III, with its greater emphasis on roll-out to the regions may need to make greater use of training courses. These may be delivered by the DEA staff, by external agencies, or a train-the-trainers approach may be adopted. External consultants will, in addition to specific technical inputs, be considered for replicating tasks that do not require DEA specialist expertise

Dissemination, awareness raising, and lesson learning: There will be more dissemination and awareness raising in DEPP III to spread good practice, by facilitating awareness raising events and by providing access to information for development of academic papers, research, etc. When an opportunity occurs, south-south exchanges between the partner countries will be facilitated. The custom of developing "good practice" or "impact papers" will be continued with dissemination through the DEA strategic communications focal point.

4.3 Theory of Change and key assumptions


Inputs
Outputs
Outcomes
Country Objectives
Strategic Objectives
Danish Climate Envelope
Experience and tools within renewable energy and energy efficiency
Decision making and inputs in-kind from DEPP partners
DEPP III sphere of control
1) MOIT capacitated to independently prepare high-quality integrated scenario-based long-term modelling of the Vietnamese energy system presented in bi-annual EORs, to provide significant support to Vietnamese national energy system planning and policy development processes. 2) Vietnamese authorities capacitated to lead and manage offshore wind development and roll-out
1) Regulatory framework developed, to ensure the security and quality of power system operation and regulation and benchmarking of power companies for increased integration of VRE and 2) Solutions focusing on the demand side and dispatchable power generation to ensure increased integration of VRE. 3) Furthermore Vietnamese power system operation capacity enhanced to ensure optimal integration of VRE into the power system
1) EE legal framework is updated and revised and compliance with EE legal framework at provincial level enforced . 2) EE incentive scheme for industry sector designed for selected enterprises in provinces, and the roadmap and action plan of finalized EE incentive scheme ready for approval and 3) EE technology catalogues for industry and technical guidelines for selected industrial sectors developed, disseminated, implemented and assessed at provincial level.
DEPP III sphere of influence
Capacity enhanced in energy sector planning and policy development, integrating renewable energy, including offshore wind and energy efficiency technologies, as cost-effective measures of meeting the Vietnamese NDCs while ensuring national security of supply
Regulatory framework and flexible tools in the power system supports the efficient and secure transition towards clean energy with a rising share of electricity from variable renewable energy sources
Incentive schemes for energy efficiency in the industrial sector and improving capacity in place to develop and revise the EE regulatory framework and enforce compliance with EE legal framework at national and provincial level
Vietnam develops low carbon pathways related to energy in support of their NDC and Vietnam upscale NDC mitigation targets and related measures by 2025
DEPP III sphere of influence
The partnership countries achieve low carbon development, implements the Paris Agreement on Climate Change and continue upscaling and realising their NDC goals
Assumptions from output to outcome
1) Vietnamese partners understand the value of strategic cooperation with Denmark, engage effectively throughout the programme and value GtG cooperation. 2) DEA ability to ensure additionality and synergies in a field with many actors. 3) Flexibility and continued attention to assumptions and risks during implementation to ensure continued alignment to Vietnamese priority needs in a highly dynamic context.
Assumptions from outcome to country objective
1) Continued commitment from partner countries to raise NDC mitigation ambitions and related policy initiatives. 2) DEA ability to strategically support transformational change aligned to partner countries NDC targets and partner policies and strategies. 3) Institutional anchoring of capacity development in partner institutions with continued application of methodology and tools for GHG emission reduction.
Assumptions from Country to Strategic Objective
Policy makers in partner countries at both sector and at the highest national development levels are seeking and ready to adopt changes that promote energy efficiency, demand management and increased generation and more efficient use of renewable energy, leading to low carbon energy generation

The Theory of Change and results framework rests on the assumption that policy makers in partner institutions at sector and at national and provincial development levels are seeking and ready to adopt changes that promote renewable energy and energy efficiency, leading to a low carbon energy pathway.

Risks to the effective realisation of this ToC are that: poor political commitment and leadership to retain a low carbon development pathway through renewable energy and energy efficiency; limited political and managerial mandate or abilities to implement policies, strategies and plans supporting green initiatives; lack of knowledge on financial competitiveness of renewable energy and energy efficiency and how Just Transition, incl. job creation, can be achieved.

4.4 Summary of development engagements and sustainable development

4.4.1 Capacity development for long-range energy sector planning

This Development Engagement describes cooperation in capacity development for long-range energy sector planning between EREA and DEA. It will consolidate and extend the work undertaken by DEPP II which supported EREA in scenario development and development of the biennial Energy Outlook Report (EOR), published for the first time in 2017 with the latest version issued in 2019. The new Development Engagement will use the biennial publication of the EOR to present energy system scenarios that show how with increasing shares of renewable energy, including offshore wind and energy efficient technologies are cost-effective alternatives to meeting the Vietnamese NDCs while ensuring national security of supply. This will be a key part of involving stakeholders, the general public and policy makers in a wider policy dialogues on energy sector planning. At the same time EREA will deepen its understanding of climate change drivers and concepts of externalities to be able to incorporate and address climate change as part of the quantitative energy system modelling. In parallel, the Development Engagement will assist authorities to lead and manage offshore wind energy development by helping prepare a regulatory framework, technical standards and design an auctioning scheme for the roll-out of offshore wind electricity.

One of the most important tools to address the challenges and influence policy action is the development of Energy Outlook Reports (EOR) for Vietnam. The EORs are based on well-documented and detailed modeling of the energy system. The latest EOR19 provides a scenario-based foundation for policy action by shedding light on the development of the energy system towards 2050. Thereby, the EOR19 intends to guide policy makers and inspire deliberation on green transition, while delivering concrete input to the forthcoming PDP8 and the Energy Master Plan. EOR19 also included perspectives regarding poverty reduction, socio-economic development including health benefits, and job creation.

EORs will continue to be developed in DEPPIII with the purpose to guide decision makers and energy planners to achieve a sustainable green transmission of the energy system and to foster a wide consensus and understanding of Vietnam's energy challenges and opportunities in the long term. The EORs will focus more on pollution costs of fossil fuels requiring a thorough study and methodology to estimate health costs (increased health expense, reduced quality of life, reduced life expectancy and

more) related to fossil fuels. These costs will be incorporated in the optimization procedure of the energy models.

EORs to be developed in DEPPIII will also focus more on financing the green transition and highlight what financial requirements (investments, market barriers, financing sources and more) would be needed to support and realize the scenarios from the energy modelling. The aim of the work is also to advise on the rate of investments for different technologies used in the modelling (e.g. is it expected that the cost of financing of fossil fuels will increase over time due to lack of willing investors and risk of stranded assets resulting in increased risk premium) and if possible also identify the most mature projects and bring these forward to investment funds like IFU/Danida Business Finance or alike. Enhancing the financing framework is expected to lead to increased job creation in the RE and EE sector in Vietnam.

EORs can be used directly or indirectly to support policy makers in achieving "SDG 7 - Ensure access to affordable, reliable, sustainable and modern energy for all" and "SDG 13 - Take urgent action to combat climate change and its impacts" incl. achieving specific targets and indicators (e.g. assist partner countries in energy planning, integration of renewable energy and framework conditions for promoting cost efficient renewable energy which will promote a more efficient energy system and supporting Vietnamese partners in formulating strategies, plans or initiatives for low greenhouse gas emissions development).

Furthermore, EORs will enable EREA to lead the effort to evaluate, revise and influence national policies towards decarbonization of power production and adopting more ambitious NDC targets without compromising security of energy supply.

Air pollution in the larger cities of Vietnam today poses significant health risks. Data from the WHO state that more than 60,000 deaths in Vietnam are linked to air pollution (WHO, 2018). In 2016, the mean values of fine particle concentration PM2.5, which is considered one of the most dangerous forms of pollution, were almost five times higher in Hanoi than the values recommended by WHO. The close link between energy consumption and air pollution makes this an area of high relevance for energy system planning. Key findings from EOR19 shows that emissions from coal in the power sector impose a large health cost on society. In 2030 all scenarios result in a health cost of pollution in the range of 7-9 billion USD. Hence, EOR19 recommends to tighten air pollution control measures in power generation and industry and include health costs of pollution in energy system modelling and planning, including PDP8. Health costs already today impose a large cost on society, and pollution from power plants is rising. Health externalities are often not considered in economical evaluations of energy planning.

4.4.2 Capacity development for renewable energy integration into the power system

This Development Engagement describes cooperation in capacity development for renewable Energy Integration into the power system between ERAV and DEA. It will consolidate and extend the work undertaken by DEPP II through which the Danish TSO Energinet supported ERAV and NLDC in modelling and understanding the practical implementation of integrating renewable energy in the power grid.

In DEPP III, through Energinet, Vietnam will get unique access to experts that can assist ERAV and NLDC in optimizing renewable energy integration. The assistance will include: promotion of greater flexibility in the power system, removing constraints on the integration of renewable energy and thus reducing the losses caused by "curtailment" (where energy from variable sources, such as wind and solar, cannot be used in the grid and is therefore wasted) which results in unnecessary release of CO_2 and significant loss of income for both government and private sector; development of a regulatory framework that will ensure the security and quality of power system operation and permit increased integration of Variable Renewable Energy (VRE) into the network, including technical requirements for connection to, and use of, the grid (so-called "Grid Codes"); assistance in and updating solutions for flexibility in power generation and demand-response to optimise VRE integration; and, assistance to ERAV and NLDC in the design and application of forecasting and monitoring tools for optimal VRE integration.

The result will be that the share of VRE in the Vietnamese energy mix will be significantly increased. Losses of energy will be reduced and the security and predictability of the market and the access to the grid will encourage the private sector to invest more in renewable energy. The overall outcome will be a faster transition towards a low carbon energy system, lower GHG emissions, reduce pollution and greater national energy security.

A more flexible energy system with low curtailment rates will ultimately contribute to lower energy intensity of the economy (less energy is used per unit of GDP) and increase the share of renewable energy in the final energy consumption supporting SDG 7 but also raise awareness the socio economic negative impact caused by "losses of energy" and the climate benefits that could be achieved by designing and operating a low carbon grid. This can be done through training and development of the human and institutional capacity of the authorities in Vietnam responsible for operating the grid and by ensuring a market based energy system giving priority to RE in the national grid ultimately supporting SDG13.

Furthermore, a more flexible energy system with higher shares of renewable energy will enable ERAV to provide the necessary basis for making it possible for Vietnam to adopt more ambitious NDC targets without compromising security of energy supply.

It's important to stress the close link between Development Engagement1 and Development Engagement2. Hence, a more flexible grid and the capacity to integrate RE is a prerequisite for reaching the RE targets set out in the EOR. Furthermore, the socio-economic benefits (e.g. reduced air pollution, health benefits, job creation) of Development Engagement2-activities will be included in the energy models.

4.4.3 Low carbon development in the industrial sector

This Development Engagement describes cooperation in low carbon development in the industrial sector between EESD and DEA. It will consolidate and extend the work undertaken by DEPP II which helped to revise the LEEC to strengthen energy efficiency regulation enforcement and compliance in industries at provincial level and pilot implementation in two partner provinces. The proposed Development Engagement will extend implementation with the EE regulatory framework at national and provincial level. It will introduce incentive schemes to encourage compliance with the law and develop procedures, guidelines, tools and templates that guide industry on monitoring and reporting their energy use. Finally, it will help produce technical catalogues and guidelines for selected industrial sectors that will identify modern available technologies for energy efficiency.

This three-pronged approach: regulation, incentivising compliance and providing technical support to comply, is expected to ensure that the EE law is effectively implemented in all provinces by 2025 and that the target of the law, and the Development Engagement target of 80% of enterprises in target provinces complying with energy benchmarking regulations by 2025, are met.

Energy efficiency (EE) is key to the transformation of energy systems and it is estimated that EE will play a critical role in limiting the growth of world energy demand to one third by 20409. Energy efficiency can for example help to reduce energy expenditure and bring down the per-unit cost of lighting, heating, refrigeration and other services. It can also help reduce pollution and greenhouse gas emissions.

A more efficient energy system will ultimately contribute to lower energy intensity of the economy (less energy is used per unit of GDP) supporting SDG 7 but also raise awareness towards energy efficiency through training and development of the human and institutional capacity to implement Vietnams ambitious EE-legislation at federal and provincial level supporting SDG13.

Furthermore, an energy efficient and low carbon industrial sector will enable EESD to provide the necessary basis for making it possible for Vietnam to adopt more ambitious NDC targets without compromising security of energy supply.

[9] IEA, 2015, World Energy Outlook.

Enhanced energy efficiency offers a unique opportunity to reconcile economic competitiveness with sustainable development, and simultaneously reduces the cost of energy and increases productivity. Improvements in residential and public sectors, for example, have delivered a wide range of social, environmental and economic benefits, including energy security, job creation, poverty alleviation, improved health, and reduced greenhouse gas emission.

It's important to stress the close link between Development Engagement 1 and Development Engagement 3. Hence, a more energy efficient industrial sector in Vietnam is a prerequisite for reaching the EE targets set out in the EOR. Furthermore, the socio-economic benefits (e.g. reduced air pollution, health benefits, job creation) of Development Engagement 3-activities will be included in the energy models.

4.5 Results Framework, outcome indicators, monitoring and evaluation

Programme	Danish Energy Partnership Programme Phase III
Country Programme Objective	Vietnam develops low carbon pathways related to energy in support of their NDC and Vietnam upscale NDC mitigation targets and related measures by 2025.

Engagement Title	Capacity Development for long-range energy sector planning
Outcome	Capacity enhanced in energy sector planning and policy development, integrating renewable energy, including offshore wind and energy efficiency technologies, as cost-effective measures of meeting the Vietnamese NDCs while ensuring national security of supply
Outcome indicator	Sustainable pathways from developed scenarios with increasing shares of renewable energy, including offshore wind and energy efficient technologies presented in the EOR, are applied within national energy and power planning and policy development.
Output 1	MOIT capacitated to independently prepare high-quality integrated scenario-based long-term modelling of the Vietnamese energy system presented in biennial EORs, to provide significant support to Vietnamese national energy system planning and policy development processes
Output 2	Vietnamese authorities capacitated to lead and manage offshore wind (OSW) development and roll-out

Engagement Title	Capacity Development for Renewable Energy Integration into the Power System
Outcome	Regulatory framework and flexible tools in the power system supports the efficient and secure transition towards clean energy with a rising share of electricity from VRE sources
Outcome indicator	Transparent regulatory framework in line with international standards in place for efficient, secure and market-based integration of VRE generation in the power system
Output 1	Regulatory framework developed, to ensure the security and quality of power system operation and regulation and benchmarking of power distribution companies for increased integration of VRE
Output 2	Solutions focusing on the demand side and dispatchable power generation to ensure increased integration of VRE
Output 3	Vietnamese power system operation capacity enhanced to ensure optimal integration of VRE into the power system

Engagement Title	Low carbon development in the industrial sector
Outcome	Incentive schemes for energy efficiency in the industrial sector and improving capacity in place to develop and revise the EE regulatory framework and enforce compliance with EE legal framework at provincial level
Outcome indicator	EE regulatory framework under effectively implementation at national and provincial level and incentive schemes in place for industries
Output 1	EE legal framework developed and revised, and compliance with EE legal framework enforced at provincial level
Output 2	EE incentive scheme for industry sector designed for selected enterprises in provinces, and the roadmap and action plan of finalized EE incentive scheme ready for approval
Output 3	EE technology catalogues for industry and technical guidelines for selected industrial sectors developed, disseminated, implemented and assessed at provincial level

Daily progress will be followed by the Development Engagement partners and DEA, who will report progress towards outputs and outcome of each engagement through annual progress reporting to the Steering Committee. All reporting should, to the extent possible and when relevant, be disaggregated by

gender, area, sector, etc. and forwarded to the DEPP III Advisory Group in Copenhagen, which follow the overall DEPP III Implementation Manual.

Detailed indicators for each specific Development Engagement output will be revisited and potentially refined as part of the inception, where annual targets, in line with already defined targets will be adjusted with reference to the guidelines for monitoring of the Danish Climate Envelope. Monitoring towards these targets will be reported through the bi-annual progress reporting using a "traffic-light" system, where:

- "green" is on-track – implementation progresses as scheduled
- "yellow" is partly on-track, which needs an explanation by the partner and DEA including actions taken to get back on-track
- "red" is off-track, which needs a detailed explanation by the partner and DEA to the Steering Committee with recommendations of changes to the implementation to get the engagement back on-track. If "red" in two consecutive reporting periods, the Steering Committee may consider reallocation between outputs within or between the Development Engagements as deemed relevant

Monitoring of actual budget spent by international and national TA will be reported in the annual progress reports by DEA, which will include an updated work plan and a projection of TA input for the following 12 months. Similar reporting will be done for others costs related to missions, workshops and study-tours.

The Danish Ministry of Foreign Affairs (MFA) shall have the right to carry out any technical mission that is considered necessary to monitor the implementation of the programme. This includes a mid-term review. After the termination of the programme support MFA reserves the right to carry out evaluation in accordance with this article.

4.6 Summary of risk analysis and risk response

Programmatic risks to DEPP III relate to the possibilities that, due to economic dislocations, internal financial disruption, or simply due to political realignment, government development priorities change, and therefore political commitment to low carbon development is reduced, or the ability of partners to devote resources to programme activities is impeded. In Vietnam, these eventualities are considered to be unlikely because major achievements arising from DEPP II have confirmed the value of the cooperation to high level policy makers. Nevertheless, the risks will be mitigated through continued dialogue with Government, and through targeted engagements that support a long-term sustainability and a low carbon pathway, whilst demonstrating immediate benefits in terms of security of energy supply. Risk is further mitigated through a flexible approach to provision of technical input, allowing support to be temporarily suspended or reallocated quickly and ensuring that any delays do not waste resources.

DEPP III will continue to work at provincial level with local partner provinces especially related to energy efficiency in the industrial sector. The programmatic risk is that provincial level authorities do not give the appropriate priority to enforce energy efficiency regulations on their local industries. At provincial level partners may not be as fully committed to low carbon energy as at the centre, and provincial authorities are very highly motivated to maintain growth. They may see energy efficiency as a threat to growth. In order to reduce impact of this risk the pilot provinces for the engagement will be selected based, in part, on their demand for support. Also, part of the capacity development is to develop awareness of the economic and environmental advantages of low carbon technology. The residual risk is considered minor.

The Institutional risks of DEPP III in Vietnam are that the reputations of DEA, MCEU, and the MFA are damaged because the programme fails to deliver its outcomes; or, that programme activities become associated with fraud, corruption or human rights violations. These are unlikely and programme design takes the mitigation of these risks into account. Screening for possible human rights issues or environmental issues will be carried out in advance. Potentially risky interventions will be identified and addressed at this stage. Since the budget is in control of the DEA, mainly allocated for TA provision from Denmark, the potential for misuse of funds or attribution of improperly safeguarded development to the programme will be insignificant and residual risk is minor.

The Covid-19 pandemic introduces a special layer of risks, of significant impact to the programme, and which are both programmatic and contextual. In terms of the programmatic aspect of the introduced risks, the pandemic has the chance to severely disrupt the possibilities of travel between Denmark and Vietnam. Additionally, lockdowns due to new waves of infection may affect the operational engagement of partner institutions due to situations like staff working from home. Similar situations are being addressed during DEPP II, which has provided valuable lessons and optimistic results regarding the ability to perform programme activities virtually. While not the preferred approach, an online virtual approach for partner interaction has proven a realistic and effective way to ensure the development of the cooperation in case further disruptions due to the pandemic come to happen.

The other dimension of the Covid-19 pandemic are contextual risks. Particularly, that the Covid-19 pandemic can cause severe economic disruption in partner countries. This economic disruption could last for several months or more, and can have a significant impact on the Government's and private sector's investments in renewable energy and energy efficiency due to changed priorities. The planned response to such a risk is to ensure close monitoring of the situation and its effects on partner countries, in conjunction with partner institutions. In this manner, engagement with partners and other stakeholders can be carried out displaying the potential for a sustainable recovery, when low carbon development becomes an integral part of the economic recovery plans.

5. Overview of programme management setup

The management set-up will be kept as simple and lean as possible. It will consist of a strategic level and an operational level to ensure efficient accountability mechanism for progress and results as well as

an effective mechanism for giving strategic directions to the programme. The implementation manual of DEPP II will be adjusted to the new phase and serve as a management guideline under DEPP III.

An Implementation Group for each Development Engagement will manage daily implementation of the annual work programmes and will consist of focal points from the partner institution, DEA, the relevant LTA and RDE. The Implementation Groups will guide daily implementation and meet on a needs basis, and will: i) develop annual work programmes and progress reports for the Development Engagements, matching priorities in the partners work programmes, ii) determine need for Technical Assistance (TA) inputs from DEA experts, LTA, international and national consultants and develop TA procurement plans; iii) draft and approve TORs for TA and; iv) monitor and coordinate day-to-day progress of Development Engagement implementation and; v) approve deliverables of TA. The Implementation Groups report on Development Engagements to the Steering Committee.

A Steering Committee is established and anticipated to meet once to twice per year and is a forum for high level policy dialogue in addition to setting direction for programme implementation. The Steering Committee should be co-chaired by the Minister or Vice Minister of Industry and Trade and the Danish Ambassador to Vietnam and include a representative from Danish Energy Agency and heads/deputy heads of departments for the Development Engagement partner institutions. Its main task will be to approve annual work programmes, budgets and reports, and review annual progress. The Steering Committee should provide strategic guidance to the Partnership Programme, encourage cross-fertilisation and discuss and resolve issues related to programming progress and decide on any reallocation between the Development Engagements. Decisions are made by consensus.

A Secretariat to the Steering Committee headed by the EESD leader, the DEA country team leader and Energy Sector Counsellor at the RDE will be established to coordinate inputs from the Implementation Groups and ensure quality assurance of materials (e.g. work programmes and progress reports) submitted to the Steering Committee and facilitate decision making processes and resolving issues during programme implementation.

5.1 Principles for division of tasks between LTA and relevant posted staff

The sector advisor will be the embassy contact person to the DEA and the LTA's under the DEPP programme administered by the DEA. The cooperation and division of responsibilities is defined as:

Long-Term Advisor:

- Technical advice of MOIT in the areas of DEPP, including providing technical assistance and building capacity in MOIT and associated agencies (EREA and ERAV) on offshore wind power in general, but especially in relation to government planning and regulation
- Contribute to strengthening the MOIT and relevant authorities' capacity to develop legislation, including roadmaps and action plans that can promote the development of offshore wind in Vietnam in a cost-effective way
- Identify specific technical needs of the relevant Vietnamese partners and facilitate technical assistance from the Danish Energy Agency's experts in Denmark

- Promote close coordination and communication between partner organizations, including facilitating status meetings incl. reporting on progress and planning of activities
- Prepare and participate in program missions to Vietnam and study trips to Denmark.
- Communicate program activities and results, including stakeholders and presentations at events in the energy sector in Vietnam, Denmark and internationally
- Support the preparation of ToRs for technical assistance and other inputs, including selecting consultants and commenting on their deliveries
- Provide input for developing work programs and preparing status reports
- Plan and prepare program-related workshops and events
- Stay updated with regard to the development of the energy sector in Vietnam and establish a personal network with development partners, civil society organizations and the private sector
- Provide input into political dialogues relevant to the partners and the entire energy partnership program, including the preparation of political briefs and / or background notes as needed.
- Coordinate and synergize tasks between DEPP III activities and the embassy activities, together with the Energy Sector Counsellor
-

Energy Sector Counsellor:

- Participate in the academic dialogue with the Danish Energy Agency, Long-Term Advisors and local partner authorities on the progress of the DEPP, including planning of missions
- Include sector-related issues following DEPP, including dialogue with multilateral organizations and other bilateral partners
- Support climate diplomacy, SDG-7 and policy dialogue. Contribute to translate technical cooperation into policy dialogue and increase NDC ambitions through climate diplomacy and other foreign policy initiatives
- Link between technical cooperation and export promotion / TC
- Facilitator of seminars, roundtables and ministerial visits (high-level visits)
- Supportive (by DEPP) dialogue with secondary partners
- Support the program's SEC by actively exploring opportunities for engagement with Danish private sector actors, Vietnamese civil society, multilateral organizations (such as IRENA, OECD and IEA) and universities / research institutions as part of the program activities, as well as increasing program policy outreach, e.g. to the Vietnamese National Assembly

6. Programme outcome budget

Vietnam DEPP III	2020	2021	2022	2023	2024	2025	**Total**
Development Engagement 1: Capacity Development for long-range energy sector planning Capacity enhanced in energy sector planning and policy development, integrating renewable energy, including offshore wind and energy efficiency technologies, as cost-effective measures of meeting the Vietnamese NDCs while ensuring national security of supply	736,367	4,418,200	4,418,200	4,418,200	4,418,200	3,681,833	**22,091,000**
Development Engagement 2: Capacity Development for Renewable Energy Integration into the Power System Regulatory framework and flexible tools in the power system supports the efficient and secure transition towards clean energy with a rising share of VRE sources	588,333	3,530,000	3,530,000	3,530,000	3,530,000	2,941,667	**17,650,000**
Development Engagement3: Low carbon development in the industrial sector Incentive schemes for energy efficiency in the industrial sector and improved capacity in place to develop and revise the EE regulatory	685,000	4,110,000	4,110,000	4,110,000	4,110,000	3,425,000	**20,550,000**

framework at national level and enforce compliance with EE legal framework at provincial level							
Total	**2,009,700**	**12,058,200**	**12,058,200**	**12,058,200**	**12,058,200**	**10,048,500**	**60,291,000**

An output based budget is available in annex 4.

Annexes

1) **Annex 1: Context Analysis**
2) **Annex 2: Partner Assessment**
3) **Annex 3: Results framework at output level**
4) **Annex 4: Budget details at output level**
5) **Annex 5: Risk Management Matrix**
6) **Annex 6: Draft Terms of Reference for LTAs**

Annex 3: Results framework for DEPP III including proposed new outcomes

New outcomes are highlighted with red font.

South Africa

As part of DEPP III in South Africa, outcome 1 with DMRE has been amended and strengthened in order to reflect the collaboration of the WASA wind atlas.

Outcome 1		Energy sector planning and policy development, integrating renewable energy through a just transition with cost-effective measures of meeting policy objectives	
Outcome 1 indicator		Completion of the national Wind Atlas for South Africa and strengthened capacity to conduct power system studies and wind resource assessment (WASA4)	
Baseline	Year	2020	Integrated Resource Plan 2019 for renewable energy targets do not incorporate just transition measures Renewable Energy Independent Power producers procurement programme in place and seven rounds completed
Mid-term target		2023	Capacity for the collection of wind energy resource data is enhanced Revised procurement procedures increase efficiency and impact in line with sustainable development policy objectives
Target		2025	Ability to realise power system planning is enhanced by the support of validated wind energy resource data Ability to independently analyse consequences and effects of different policy measures and scenarios on procurement procedures and practices, including support for a just energy transition.

Outcome 2	Regulatory framework, institutional development, grid and energy system energy planning support effective transition to a liberalized market with a rising share of electricity from variable renewable energy sources

Outcome indicator		Institutional framework conditions developed
		Energy modelling scenarios applied to support the cost-effective market transformation and expansion of variable renewable energy
		Planning tools and operational procedures developed
Baseline		1: Knowledge platform does not exist to drive advocacy and inform decision making to support a market transformation
		2: No mapping of opportunities for techno-economic assessments available
		3: Need for better planning tools and operational procedures that enable implementation of IRP2019 without compromising grid stability
Target		1: Knowledge platform fully integrated and supporting decision making
		2: Tools developed in use supporting a greater flexibility in the power sector
		3: Planning tools and operational procedures developed and in use

Outcome 3		Regulatory framework, operational procedures and flexible options in the power system supports cost-effective security in supply with a rising share of electricity from variable renewable energy sources
Outcome indicator		Recommended amendments, enhancements and actions proposed on technical regulations (grid codes)
		% reduced curtailment and % increased uptake in variable renewable energy
		Energy modelling scenarios applied to support the cost-effective integration and expansion of variable renewable energy sources
Baseline	2020	1: Regulation is not effective in supporting dispatchable energy sources and demand connection
		2: Forecasting tool of variable renewable energy in development, scheduling and dispatching of large amounts of variable renewable energy not operationally implemented
		3: Basis for ancillary services in a liberalized market not present
Target	2025	1: Regulation effectively support dispatchable energy sources and demand connections
		2: Development of Forecasting Tools and scheduling and dispatching tools to support large penetration of variable renewable energy.

	3: Framework for ancillary services in a liberalized market incl. modeling tools, developed.

Vietnam

DEPP III in Vietnam is designed with three outcomes. The efforts to support energy efficiency is captured in the third outcome.

Outcome 1		Capacity enhanced in energy sector planning and policy development, integrating renewable energy, including offshore wind and energy efficiency technologies, as cost-effective measures of meeting the Vietnamese NDCs, while ensuring national security of supply.
Outcome indicator		Sustainable pathways from developed scenarios with increasing shares of renewable energy, including offshore wind and energy efficient technologies presented in the EOR, are applied within national energy and power planning and policy development.
Baseline	Year 2020	- EOR issued biennially with projections for different development paths of energy sector development - EREAs capacity on offshore wind is limited
Target	Year 2025	- The biennial EOR is used as the main vehicle to evaluate, revise and raise ambitions of future energy and climate scenarios and selected sustainable pathway thereof meeting the NDC commitments is applied in national energy sector planning and policy development - MOIT leads implementation of necessary preconditions for offshore wind sector development

Outcome 2		Regulatory framework and flexible options in the power system supports the efficient and secure transition towards clean energy with a rising share of electricity from variable renewable energy sources
Outcome indicator		Transparent regulatory framework in line with international standards in place for efficient, secure and market-based integration of variable renewable energy generation in the power system
Baseline	Year 2020	Incomplete framework for integration of renewable energy in place.

Target	Year 2025	- Ancillary services deployment and evaluation with reliant of electricity market stakeholders for variable renewable energy integration is governed by enhanced regulatory framework. - Increased variable renewable energy integration, system flexibility that rely on variable renewable energy forecasting, and enhanced system stability

Outcome 3		Incentive schemes for energy efficiency in the industrial sector and improved capacity in place to develop and revise the energy efficiency regulatory framework at national level and enforce compliance with energy efficiency legal framework at provincial level
Outcome indicator		Energy Efficiency regulatory framework under effective implementation at national and provincial level and incentive schemes in place for industries
Baseline	Year 2020	- Compliance with energy efficiency legal framework for industrial sector is limited at provincial level - EE incentive schemes for industry are absent
Target	Year 2025	- Compliance with energy efficiency legal framework for industrial sector improved at provincial level - EE incentive scheme ready for approval by the competent authorities

Annex 4: Updated budgets for the two DEPP III countries

South Africa

DEPP III in South Africa	2020	2021	2022	2023	2024	2025	Total
Outcome 1: Energy sector planning and policy development, integrating renewable energy through a just transition with cost-effective measures of meeting policy objectives							
Output 1: Completion of the national Wind Atlas for South Africa and strengthened capacity to conduct power system studies and wind resource assessment (WASA4)	582,312	3,493,870	3,493,870	3,493,870	3,493,870	2,911,558	17,469,350*
Output 2. Procurement and planning processes of renewable energy	185,913	1,115,480	1,115,480	1,115,480	1,115,480	929,567	5,577,400
Total for outcome 1	768,225	4,609,350	4,609,350	4,609,350	4,609,350	3,841,125	23,046,750
Outcome 2: Regulatory framework, institutional development, grid and energy system energy planning support effective transition to a liberalized market with a rising share of electricity from variable renewable energy sources							
Output 1: Knowledge management platform within Corporate Strategy (incl LTA)	358,505	2,151,030	2,151,030	2,151,030	2,151,030	1,792,525	10,755,150
Output 2: Flexibility of the SA power sector for integration of RE…	125,172	75,103	75,103	75,103	75,103	625,858	3,755,150
Output 3: Grid planning and integration of RE from transmission to distribution level...	125,172	75,103	75,103	75,103	75,103	625,858	3,755,150
Total for outcome 2	608,848	3,653,090	3,653,090	3,653,090	3,653,090	3,044,242	18,265,450

Outcome 3: Regulatory framework, operational procedures and flexible options in the power system supports cost-effective security in supply with a rising share of electricity from variable renewable energy sources							
Output 1: Capacity strengthened to progress grid codes for increasing RE penetration…	143,053	85,832	85,832	85,832	85,832	715,267	4,291,600
Output 2: Forecasting scheduling and dispatching tools developed...	143,053	85,832	85,832	85,832	85,832	715,267	4,291,600
Output 3: Basis established for a liberalized ancillary service market	143,053	85,832	85,832	85,832	85,832	715,267	4,291,600
Total for outcome 3	42,916	2,574,960	2,574,960	2,574,960	2,574,960	2,145,800	12,874,800
Total	**1,806,233**	**10,837,400**	**10,837,400**	**10,837,400**	**10,837,400**	**9,031,167**	**54,187,000**

*The additional 15 million DKK have been added to an existing budget line with a value of 2,469,350 DKK under output 1 resulting in a total value of 17,469,350.

Vietnam

Vietnam DEPP III	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**Total**
Outcome 1: Enhanced capacity in energy sector planning and policy development by integration of renewable energy and cost-effective measures of meeting the Vietnamese NDCs, while ensuring national security of supply							

Output 1: Energy system planning incl modelling and EORs	412,101	2,472,603	2,472,603	2,472,603	2,472,603	2,060,503	12,363,015
Output 2: Offshore wind	2,076	1,245,597	1,245,597	1,245,597	1,245,597	1,037,998	6,227,985
LTA	116,667	700	700	700	700	583,333	3,500,000
Total outcome 1	736,367	4,418,200	4,418,200	4,418,200	4,418,200	3,681,833	22,091,000
Outcome 2: The regulatory framework includes flexible energy options in the power system supporting energy efficiency, security of supply and increases share of renewable energy in the national energy mix.							
Output 1: Updated grid codes and regulation	157,222	943,333	943,333	943,333	943,333	786,111	4,716,667
Output 2: Market mechanisms	157,222	943,333	943,333	943,333	943,333	786,111	4,716,667
Output 3: Capacity to optimize integration of VRE into the grid	157,222	943,333	943,333	943,333	943,333	786,111	4,716,667
LTA	116,667	700	700	700	700	583,333	3,500,000
Total outcome 2	588,333	3,530,000	3,530,000	3,530,000	3,530,000	2,941,667	17,650,000
Outcome 3: Introduction of incentive schemes for energy efficiency in the industrial sector and improved capacity to develop and revise the energy efficiency regulatory framework at national level and enforce compliance with the legal framework for energy efficiency at provincial level.							
Output 1: Energy efficiency legal framework	100,872	605,233	605,233	605,233	605,233	504,361	3,026,167

Output 2: Energy efficiency incentive scheme for industry	249,922	1,499,533	1,499,533	1,499,533	1,499,533	1,249,611	7,497,667
Output 3: Energy efficiency technology catalogues and technical guidelines	100,872	605,233	605,233	605,233	605,233	504,361	3,026,167
Output 4: Up to 100 energy audits per year for energy intensive industries completed.			5,940,000	5,940,000	5,940,000	5,940,000	23,760,000
Output 5: Establishment of a Centre of excellence at MOIT for energy efficiency in the industries			660,000	660,000	660,000	660,000	2,640,000
LTA	233,333	1,400,000	1,400,000	1,400,000	1,400,000	1,166,667	7,000,000
Total outcome 3	684,999	4,109,999	10,709,999	10,709,999	10,709,999	10,025,000	46,950,001
Total	**2,009,699**	**12,058,199**	**18,658,199**	**18,658,199**	**18,658,199**	**16,648,500**	**86,691,001**

Annex 5. Updated risk matrix

Updated risk matrix for DEPP III in South Africa. New risks as a consequence of the additional support are marked with red font.

Contextual risks

Risk Factor	Likelihood	Impact	Risk response	Residual Risk	Background to assessment
Government will introduce policies that temporarily refocus development priorities, moving away from its National Development Plan 2030.	Medium	Significant	Learning from DEPP II programme activities have been tailored to emphasise growth, increasing power supply and supporting a just transition. These activities will remain relevant under any feasible development scenario.	Low	The National Development Plan envisages that, by 2030, South Africa will have an energy sector that provides a reliable and efficient energy service at competitive rates, that is socially equitable through expanded access to energy at affordable tariffs and that is environmentally sustainable through reduced pollution. This is the basis for South Africa's strong policy framework, but there are many voices within the country that oppose clean energy for a variety of reasons.

Programmatic risks

Risk Factor	Likelihood	Impact	Risk response	Residual Risk	Background to assessment
Poor political commitment,	Likely	Significant	Continue support and dialogue with the	Low	South Africa has pledged more ambitious emissions reduction as part of the COP26

and therefore lack of action, to retain low carbon development.			Government, and through targeted engagements that support a long-term sustainability, just transition and and low carbon path.		preparations which signal a strong commitment to the mitigation effort.
Lack of capacity and ownership to the cooperation from key partners.	Likely	Significant	Programme design has been adjusted to spread the risk among several	Medium	Some of the partners from DEPP II and DEPP III have been difficult to engage due to other priorities.
Overlap of activities with other Development Partners in the sector and overloading of partners capacity	Unlikely	Insignificant	The Danish Embassy is active in coordination of development activities together with relevant ministries and other development partners.	Minor	Many development partners are seeking to cooperate in the energy sector.
Difficulties in attaining permits from landowners may	Unlikely	Significant	DEA will work with DMRE and other local stakeholders in order to make sure, that landowners support the	Minor	During WASA 1-3, permits to access land and roads have been secured by short-term lease contracts with landowners. If access

affect the ability to erect the measurement masts			WASA 4 project. Support will be achieve via information sharing regarding the project, objective, time period, etc.		to land is not secure, WASA 4 will identity alternative sites. There will be no need for expropriation of land.

Institutional risks

Risk Factor	Likelihood	Impact	Risk response	Residual Risk	Background to assessment
The consortium implementing WASA 4 fails to connect with DMRE as part of the implementation of the project.	Unlikely	Significant	The consortium implementing WASA is well established and has previously had a good working relationship with DMRE. DEPP III will ensure that DMRE is actively engaged in the project and that results are adopted.	Minor	Limited ownership by national institutions in South Africa in support of the WASA project would be critical to the implementation and later utilization of the wind atlas. However, DMRE has been very engaged in previous phases of the WASA and the demand for the final phase is significant.

Vietnam

Updated risk matrix for DEPP III in Vietnam. New risks as a consequence of the additional support are marked with red font.

Programmatic risks

Risk Factor	Likelihood	Impact	Risk response	Residual Risk	Background to assessment
Provincial level authorities do not give the appropriate priority to enforce energy efficiency regulations on their local industries	Likely	Significant	The pilot provinces for the engagement will be selected based, in part, on their demand for support.	Minor	Some provincial authorities are reluctant to enforce legislation because they are concerned that industry productivity will be affected with consequent effects on the local economy.
Lack of available finance on the commercial market to support energy efficiency investments at	Unlikely	Significant	The risk is mitigated by the energy audits that provide validated guidance on the most cost effective measures and the establishment of the Centre of Excellence to engage third party stakeholders (e.g. financing, technology providers,	Minor	Limited access to finance for investments in energy efficiency is a well-known barrier in Vietnam.

energy-intensive industries

equipment, solution suppliers) in assisting enterprises with implementation of proposed energy efficiency measures.

Annex 6: Process action plan for new initiatives under DEPP III

Process Action Plan for additional support under DEPP III

Step	Activity	Date
1	Kick-off meeting for the formulation between MFA GDK and ELK, RDEs, MCEU and DEA	13-aug
2	Ongoing formulation and dialogue with partners	Ultimo august - medio September
3	Submission of document to the Danida Programme Committee and as well as desk-appraisal	14-sep
4	Meeting in Danida Programme Committee	04-okt
5	End of desk appraisal	01-nov
6	Submission of documents to UPR	08-nov
7	Meeting in UPR (TBC)	25-nov
8	Approval by the Minister (TBC)	dec-21
9	Approval by partners	First half of 2022
10	Mid-term review of DEPP III including the new projects in South Africa and Vietnam.	Medio 2023

Annex 7: Appraisal Recommendations

In this Annex the Appraisal overall conclusion and recommendations and the follow-up is summarised:

Three sets of recommendations are given:

1. General recommendations of the Programme Committee
2. Recommendations to the DEPP III program document
3. Recommendations to the INDODEPP project document.

1. General recommendation of the Programme Committee

Recommendation by the Programme Committee	Follow-up
Recommendation 1 The PC reiterated the **need for an update** of the PD's with a particular emphasis on handling of the risks created by the Covid-pandemic, and on including specific targeted activities for Gender and HR in accordance with the Danida Guidelines.	The recommendation concerning the risk of the Covid-pandemic has been addressed in the Risk Analysis. The criteria for unallocated funds allows for new activities in support of e.g civil society consultation and analysis of HR and gender specific issues related to project implementation. One example presented in the project document is the possible support of the presidential climate Commission in South Africa. The project supports green transition of the energy sector which has co-benefits in terms of health, environment and gender.
Recommendation 2 In relation to the update of the PD's the PC **recommended** to 're-visit' the original PD's in order to seek answers to the strategic questions and develop the holistic Doing Development Differently approach to capture synergies internally to Danish bilateral and Danish Multilateral engagements.	The recommendation concerning Doing Development Differently has been addressed as crosscutting feature in the programme document. Doing Development Differently is supported by bringing multiple Danish instruments in play in support of the overall objective of the DEPP III programme. Besides the core bilateral engagement and technical assistance, the programme bridges to financial institutions, multilateral development organisations, NGOs and civil society as well as the Danish trade council.

2. Recommendations to DEPP III programme document:

Title of project support	**Enhanced engagement under the Danish Energy Partnership Programme III (2021-25)**
File number:	**F2: 2020-17097**
Appraisal report date:	**22nd October 2021 (draft)**
Council for Development Policy meeting date:	
Summary of possible recommendations not followed:	

The Appraisal is positive and the additional support to DEPP III is recommended for approval subject to consideration of the recommendations listed below.

The proposed additional support is in line with **the Danish Government's Climate Act and the SDG priorities** as set out in the 'The World We Share' strategy for development cooperation. The Appraisal notes that the proposed additional support was conceived in close cooperation existing **well-placed partners** in the three concerned countries. Further, the additional activities were discussed and agreed with a view to go beyond the already planned capacity building activities and enter into activities that are more concrete and closer to producing results.

The Appraisal **overall finds** the draft PD well written and the additional support is well argued. The Appraisal notes that the additional support follows and is closely tied to the DEPP III project activities already under preparation and implementation based on the October 2020 approval by UPR.

In addition to the recommendations of the Programme Committee, see Annex 3, the Appraisal recommendations in relation to the finalisation of the PD for DEPP III are listed specifically below.

Recommendations by the appraisal	**Follow up by the Representation**
Context and Partners:	
Recommendation 1: • South Africa: Embassy to engage in SA WG in order to promote DEPP III and engage with potential investors and developers (also from the Denmark). The TOC to be updated with a view to include the cause-effect of actively engaging in promotion and development of wind projects in SA based on the WASA project. • Vietnam: The Embassy to facilitate establishment of partnership linkages from the DEPP III energy audit activities towards developers and investors seeking to establish pilot and demonstration projects to develop a market for green technology projects to be replicated throughout the concerned sectors. The Embassy to also facilitate with donor financed facilities to subsidize/finance new (green) industrial energy projects to reduce emission of GHGs.The TOC should be updated to include the cause-effect of actively engaging in promoting pilot and demonstration projects feasible to be replicated throughout the concerned sectors.	The recommendation has been adopted. The embassy with support from DEPP III will be engaged in the SA WG to promote findings of DEPP III towards financial institutions as well as donor coordination. The embassy will also engage potential investors and developers. The ToC has been updated accordingly. The recommendation has been adopted. The embassy and MOIT with support from the overall DEPP III programme will seek partnership linkages with financial institutions, in particular the World Bank's Vietnam Energy Efficiency for Industrial Enterprises, for further pilot project development. With support from the DEPP III programme the embassy will be engaged in donor coordination. The ToC has been updated according to the recommendation. It has been decided not to include the Off Shore Wind activities in China in the project.

• China: The proposed Centre of Excellence for offshore wind should be a pilot activity open for partners in the resource base with a view to promoting offshore wind development projects in China. The Centre of Excellence should be reviewed mid-term in order to assess whether the partnerships should be focused and continued or phased out. The TOC should be updated to include the cause-effect of actively engaging the Centre of Excellence in promoting pilot and demonstration projects feasible to be replicated throughout the offshore wind sector in China.	
Strategic Considerations and Justification	
Recommendation 2: • South Africa: The Embassy and DEPP III establish links to relevant governing councils of multilateral facilities promoting investments in green transition in South Africa in order to create momemtum for the DDD holistic approaches. The ToC should be adsjuted to include the causal link from DEPP III through the multilaterals towards generation of investment activities with real impact on transition towards green technologies and reduction of GHG emissions. • Vietnam: The Embassy engages in establishment of linkages in Vietnam to existing and upcoming donor financed facilities to subsidize pilot and demonstration projects identified from the ernergy audits for new (green) energy to industries to reduce emission of GHGs. The TOC should be updated to include the cause-effect of actively engaging in investment facilities promoting pilot and demonstration projects feasible to be replicated throughout the concerned sectors. • China: The Centre of Excellence to be structured in such a way that Danish developers and investment funds (Danish, Chinese of International) are facilitated in regard to engaging with development of investment partnerships for offshore wind projects in China. As such, The Theory of Change should be updated to include the potential impact of the Centre of Excellence engaging and facilitation investment funds for offshore wind projects in relation to energy transformation.	The recommendation has been adopted. The embassy and DEPP III will establish links to the governing councils of multilateral financial facilities (in particular the AfDB and the Just Transition Partnership) promoting investments in green transition in South Africa. The ToC has been updated according to the recommendation. The recommendation has been adopted. MOIT, the embassy and wider DEPP III programme will establish linkages to donor finance institutions (in particular the World Bank) to bridge between the energy audits and further project development. The ToC has been updated according to the recommendation. It has been decided not to include the Off Shore Wind activities in China in the project.

• • China. The appraisal **recommends** a review of the Centre of Excellence, as a pilot project, as part of the Mid-term-review of DEPP III. The review should also assess the scope of the Centre and the continued relevance in relation to facilitation of development of investment partnerships in the offshore wind sector in China.	
Results Framework updated	
Recommendation 3: To provide the necessary flexibility to the projects to respond to emerging risks and to pursue new opportunities during implementation. The principles for application of the **adaptive management approach** should be clearly described in the PD, and in principle the procedures should be in place to adjust the results framework every time a change in approach, objectives, outcomes, or outputs are approved.	The recommendation has been adopted. The adaptive management approach is described under Management and reporting
Risk Management Approach	
Recommendation 4: The adaptive management approach should also include monitoring of risks and procedures for an adaptive risk management approach as a minimum for the risks listed for the additional activities in the three countries. The procedures should be described in terms of likelihood and impact in order to be aligned with the existing risk matrix, and the adaptive procedures should be included in the risk matrix.	The recommendation has been adopted. The adaptive management approach to monitoring risks and procedures is described under Management and reporting as well as Risk analysis.
Anti-corruption Measures	
Recommendation 5 A Communication Strategy should be developed and implemented in order to secure full transparency in potential project proposals and in future engagements with external partners, developers, and investors.	DEPP III and the Danish embassies in the partner countries prioritize communication towards external national and international stakeholders to disseminate lessons and findings from the programme in support of low carbon development. Targeted stakeholders include project developers and investors. The communication will be based on DEA's existing communication strategy capturing all DEA's bilateral partnerships.

3. Recommendations to the INDODEPP project document

Title of Project Support	**Appraisal of the Indonesian-Danish Energy Agency Partnership Project**
File Number	**F2: 2020-34198**
Appraisal Report Date	

Council for Development Policy meeting date:	
Recommendations by the appraisal	**Follow up by the Representation**
The Appraisal is positive and the additional support to INDODEPP is recommended for approval subject to consideration of the recommendations listed below. The proposed additional support is in line with **the Danish Government's Climate Act and the SDG priorities** as set out in the 'The World We Share' strategy for development cooperation. The Appraisal notes that the proposed additional support was conceived in close cooperation existing **well-placed partner** in Indonesia. Further, the additional activities were discussed and agreed with a view to go beyond the already planned capacity building activities and enter into activities that are more concrete and closer to producing results. The Appraisal **overall finds** the draft PD well written and the additional support is well argued.	
In addition to the recommendations of the Programme Committee, see Annex 3, the Appraisal recommendations in relation to the finalisation of the PD for INDODEPP in relation to:	
Recommendation 1 Regarding the <u>Institutional Context and Partners,</u> the Appraisal **recommends** to identify relevant fora or working groups in order to engage with additional external stakeholders, investors and developers, to speed up implementation and achievement of actual impact and eventually also make sure that the focus is placed at the projects most appropriate for investors and developers (also from the Denmark). The TOC to be updated with a view to include the cause-effect of actively engaging in promotion and development of concrete projects.	Engagement and coordination with other donors are facilitated by the embassy as part of the Friends of Indonesia Renewable Energy Dialogue forum. Engagement with investors (such as EKF, IFU and DSIF) and developers is facilitated though the embassy as well as DEA via frequent dialogue and exchange of information. The TOC have been updated and does now include this aspect in the causality.
Recommendation 2 The <u>Strategic Considerations and Justification</u> for the support, the Appraisal **agrees** with the PC **recommendation** to include *a specific effort to establish synergies and cooperation with multilateral partners working in the same target countries and sectors and with a focus on creating pilot projects and bankable investments to further decarbonisation and transition to renewable energy,* see also recommendation 2 for DEPP III.	This aspect is now further elaborated and the project will establish synergies and cooperation with multilateral partners to promote green investments and pilot projects at province level. Coordination and dialogue will be established with the World Bank and Asian Development via the Coal Phase Out Acceleration Offer which Denmark is co-financing.
Recommendation 3 To provide the necessary flexibility to the projects to respond to emerging risks and to pursue new opportunities during implementation. The principles for application of the adaptive management approach should be clearly described in the PD, and the adaptive management procedures should be in place to adjust the results framework every time a change in approach, objectives, outcomes, or outputs are approved	The recommendation has been adopted. The adaptive management approach is described under Management and reporting

Recommendation 4 The adaptive management approach should also include monitoring of risks and procedures for an adaptive risk management approach as a minimum for the risks listed for the additional activities in the Indonesia programme. The procedures should be described in terms of likelihood and impact in order to be aligned with the existing risk matrix, and the adaptive procedures should be included in the risk matrix.	The recommendation has been adopted. The adaptive management approach to monitoring risks and procedures is described under Management and reporting as well as Risk analysis.
Recommendation 5 The budget for contingencies (DKK 5 mill) should be reallocated to unallocated funds and managed in accordance with the management procedures for unallocated funds	The budget of DKK 5 mill for contingencies (and one million in unallocated) is part of the initial INDODEPP budget and not part of this project extension. This project adds DKK 3.3 mill in unallocated funds and does not include contingencies. The DKK 5 mill has been reallocated from contingencies to unallocated funds proving a total unallocated budget of DKK 9.3 mill which corresponds to 12% of the total budget.
Recommendation 6 A Communication Strategy should be developed and implemented in order to secure full transparency in potential project proposals and in future engagements with external partners, developers, and investors.	INDODEPP and the Danish embassy in Jakarta prioritize communication towards external stakeholders in Indonesia as well as international to disseminate lessons and findings from the project in support of low carbon development. Targeted stakeholders include project developers and investors. The communication will be based on DEA's existing communication strategy capturing all DEA's bilateral partnerships.

I hereby confirm that that the appraisal identified the above-mentioned issues and that the appraisal team has provided the recommendations stated above.

Signed: 1. December 2021

Torben T. Larsen

……
Torben Traustedt Larsen
Chief Consultant, ELK

I hereby confirm that the Representation has undertaken the follow-up activities stated above. In cases where recommendations have not been accepted, reasons for this are given either in the table or in notes enclosed.

Signed: 8th January 2022

……
Karin Poulsen
Head of Department for Green Diplomacy
and Climate