Ministry of Foreign Affairs of Denmark

Ministry of Climate, Energy and Utilities of Denmark

## **DRAFT**

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Enhanced engagement under the Danish Energy Partnership Programme III

2021-25

Additional interventions in China, Vietnam and South Africa
14. September 2021.

#### **Abbreviations**

 $\mathbf{CO_2}$  – 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)

**ERI** – Energy Research Institute of the NDRC (China)

Eskom - Electricity Supply Commission

FYP - Five-Year Plan

GDP - Gross domestic product

GHG - Greenhouse Gas

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

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)

RDE – Royal Danish Embassy

**RE** – Renewable energy

**SDG** – Sustainable Development Goal

SEC - Strategic Engagement and Cooperation

SSC – Strategic Sector Cooperation

TA – Technical Assistance

ToC - Theory of Change

UNFCCC - United Nations Framework Convention on Climate Change

**USD** – United States Dollars

VRE - Variable Renewable Energy

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# Programme document for enhanced engagement under DEPP III

## 1. Introduction

The IPCC Sixth Assessment report is very clear in its statements. Human-induced climate change isaffecting weather and climate extremes in every region across the globe. The Danish Climate Act is a direct response to the global climate crises and the act is explicit in its objective. It stipulates the legally binding targets of 70% reduction of greenhouse gases in 2030 and a climate neutral society in 2050. It describes how Denmark will actively support the Paris Agreement and the target of 1,5 Celsius degree global temperature rise.

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. The international cooperation on energy under the strategic sector cooperation will lie at the heart of the efforts to promote green transition and underpin Danish climate diplomacy".

By targeting a green transition of the energy sectors in growth economies with high levels of current and projected greenhouse gas emissions, Denmark is taking global leadership on reaching sustainable development goal (SDG) number 7 on sustainable energy. The Danish government has in the financial act for 2022 walked the talk by increasing the Development Cooperation budget for the Climate Envelope.

Since 2012, the Ministry of Foreign Affairs (MFA), Ministry of Climate, Energy and Utilities (MCEU) and the Danish Energy Agency (DEA) have been engaged in partnerships with energy ministries and administrations in Vietnam, South Africa, Mexico and China under the Danish Energy Partnership Programme (DEPP). The main objective is to support that "the partnership countries are on track to achieve low carbon development, implementing the Parish Agreement on Climate Change and continuing upscaling and realising their NDC goals". DEPP III was approved in October 2020 with a total budget of 250 million DKK covering a five-year programme in the four countries.

The Danish Energy Agency has established long-term trust-based relationships for capacity building with central authorities governing the energy sector at national and regional levels. Having a close and long-term relationship with selected partners is essential in order to access the analytical backbones of the energy sector and to influence policy makers towards low carbon development. These circumstances underpin the value of deeper engagements in three countries under DEPP III.

Since October 2020 - and in spite of CoVid-19 - the overall trend is that cooperation and dialogue have been prioritized by all partners. Part of the dialogue with the Chinese partners has been focused on how to increase efficiency in project implementation by integrating the Strategic Sector Cooperation on Off Shore Wind in the DEPP III, which was recommended by the appraisal of DEPP III. In Vietnam, the planning of DEPP III intervention has resulted in an agreement of introducing energy audits as an instrument for creating an important incentive scheme for industries to comply with the Law on Energy efficiency and Conservation. Lastly, in South Africa the main dialogue has been on how to optimize the use of the wind

atlas for South Africa (WASA). WASA is essential to promote wind energy in South Africa, but will also serve as a strategic dimension for DEPP III's efforts on just transition and coal phase out in selected provinces. These three very concrete windows of opportunities in the partner countries combined with the Danish political wish to increase the Danish global push for a green transition in the energy sector are the reasons for the proposed additional funding for DEPP III in South Africa, China and Vietnam under the Climate Envelope 2022.

**Process of quality assurance and the approval process:** The project design will be adjusted to the recommendations from the programme committee and appraised during October/November 2021. The presentation to the Council for Development Policy is planned for November 2021 or January 2022 followed by approval by the Minister of Development Cooperation and approval by the parliamentary finance committee. The appraisal will be conducted by ELK as a desk appraisal based on the appraisal of DEPP III in 2020.

# 1. Strategic consideration and justification for the proposed interventions.

The project supports the Danish Government's Climate Act, the Global Climate Strategy and the SDG priorities in the Strategy for Development Cooperation. The Danish government's goal of contributing to the Paris agreements and the target of limiting the global increase in temperatures to 1,5 Celsius degree is supported by development cooperation with growth economies, where the existing and projected increases in energy demand and green-house gas emissions (GHG) are highest, thereby ensuring that the Danish contribution will have the highest possible effect on global warming. The goal of the Danish Energy Agency's government-to-government cooperation in the energy sector is to apply the Danish experience of green energy transition in the dialogue with partners and providing knowledge and technical solutions as well as efficient regulatory frameworks to meet concrete challenges in partner countries and reduce dependency of fossil fuels.

## 1.1. Strategic considerations South Africa – WASA4

Following the explicit request by the partners in South African Department of Mineral Resources and Energy (DMRE), the DEPP III in South Africa will be expanded to support the fourth phase of the Wind Atlas of South Africa (WASA4). Reliable, accurate and representative data on availability of wind resources are an integral part of South Africa's ambitious renewable energy path mapping and has become a high priority of Department of Mineral Resources and Energy. The proposal from the partners is that the DEA engages in the Wind Atlas project instead of the planned collaboration on energy modelling originally planned for under DEPP III. The outcome for DEPP III in South Africa is to strengthen: "Energy sector planning and policy development, integrating renewable energy through a just transition with cost-effective measures of meeting policy objectives". After a comprehensive dialogue with the Department of Mineral Resources and Energy and the sector advisor at the Danish Embassy, DEA agrees that completing the coverage of the national Wind Atlas will improve the prospects of reaching the DEPP III outcome.

Based on the support from the DEA to the previously phases of WASA (supported by Danida and the Global Environmental Facility), South Africa has developed an excellent wind resource assessment capability, enabling the planning of large-scale exploitation of wind power. The quality of the Wind Atlas has been instrumental for the Department of Mineral Resources and Energy to impact on policy development and to become a driver for expanding wind energy in South Africa.

The additional support to DEPP III will target mapping of wind resources in the Mpumalanga province, which accounts for 83% of South Africa's coal production. Mpumalanga is thereby the most important province to implement alternatives to coal and a just transition of the work force. The Danish Energy Agency will utilize findings from WASA4 and other complementary studies to propose plans for a comprehensive effort for just transition and coal phase out in Mpumalanga.

The cooperation is constructed around technical day-to-day work between the Department of Mineral Resources and Energy, the Danish Energy Agency and specialists from mainly the Danish Technical University. The work will e.g concentrate on analysis for selection of sites for wind measurements, monitoring of specific sites and production of the Wind Atlas. The cooperation will be facilitated by the Danish energy sector counsellor at the Danish embassy. The Danish engagement in WASA4 will be directly connected to other engagements under DEPP III and broader Danish climate diplomacy in South Africa.

## 1.2. Strategic considerations China – integration of Off Shore Wind in DEPP III

China is the world's largest emitter of greenhouse gases and accounts for 27% of the global CO2 emissions. China has an ambitious agenda for the transition of its energy sector and strives to secure access to sustainable and reliable energy sources while keeping up with significant growth rates. This was emphasised in 2020 by President Xi Jinping's commitment on China's efforts to achieve peak carbon emissions by 2030 and attain carbon neutrality by 2060. While renewable energy is progressing in China, coal is by far the most dominant fuel source as it represent 65% of the energy used for electricity in 2018. The International Energy Agency estimates that China will increase the use of coal by approximately 30% from 2018 to 2030. On a global level, China represents over half of the world's coal use for electricity. The Danish ambition is to be able to push for change by demonstrating transparent and effective regulations and technical solutions that will contribute to reductions in China's CO2 emission – and thereby contribute significantly to the global efforts of reducing emissions.

China has demonstrated a great commitment to its transition towards a low carbon economy through an increased use of renewable energy, and the country has set ambitious targets for a wide array of renewable energy technologies including offshore wind energy. The existing Quality Offshore Wind Sector Strategic Cooperation programme (SSC 2019-2021) supports the Sino-Danish government cooperation through a targeted effort based on Danish regulatory mechanisms, helping to accelerate the green transition in China. Key deliverables from the SSC programme include numerous workshops and technical interactions on offshore wind development (e.g. on power market, grid development, flexible solutions and Maritime Spatial Planning) as well as joint technical reports with clear recommendations on how to strengthen offshore wind energy in China. DEA's cooperation helps to activate the offshore wind sector by ensuring a

higher standard and better quality, while also levelling the playing field for domestic and international investors.

The proposed integration of the SSC as a new component of DEPP III in China is a direct response to the appraisal of DEPP III, which recommended the integration into the overall DEPP modality, in order to strengthen project implementation, project management and create stronger synergies with DEPP III and the broader Danish climate diplomacy in China. The financial engagement will be at the same level as in previous years. The partnership is constructed around a high-level working group with National Energy Administration, Danish Embassy in Beijing and Danish Energy Agency. The high-level working group governs the programme, approves the annual work plans, etc. Daily operations is performed at a technical level in National Energy Administration, Danish Energy Agency and the energy sector counsellor at the Danish Embassy in Beijing.

The additional support to DEPP III in China will enable a continued partnership from 2022 to 2025. Based on clear demand from the partner, a Centre of Excellence will be the main vehicle for the continued Sino-Danish engagement on offshore wind. Today, the quality of the existing offshore wind installations is difficult to assess, because of lack of transparency. The Centre of Excellence will bring a new level of transparency i.e. via a virtual platform with open assess. Danish experience can help to activate the offshore wind sector by ensuring a higher standard and better quality, while also levelling the playing field for domestic and international investors. The Centre of Excellence will most likely be placed in Shanghai with close ties to the Danish Consulate General.

Technical assistance and capacity building will include clear recommendations on how to ensure the best conditions for just transition of the work force while transitioning from black to green jobs. In this regard, it is worth noting that successful pilot projects at provincial level, incl. dimensions of just transition, often are replicated at national level once the pilot project has proved its worth. Targeted provinces include Jiangsu and Zhejiang, but the final choice is pending further dialogue with partners.

An integration with the DEPP III energy outlook reports in China will further allow for the development of roadmaps for offshore wind deployment, including documenting the associated needs for just transition and job creation. Furthermore, the roadmaps will be able to highlight the importance of offshore wind in the phasing out of coal in China. Finally, synergies to the Danish Maritime SSC-programme is foreseen where Chinese and Danish authorities collaborate to reduce maritime climate pressure and improve conditions for health and safety in the sector, as well as green fuels for sea transport via Power-to-X.

## 1.3. Strategic considerations Vietnam – Energy Audits

As expressed in Vietnam's updated National Determined Contributions NDC) under the Paris Agreement (July 2009), Vietnam will reduce GHG emissions by about 7.3% compared to the business-as-usual scenario by 2025, and by 9 % in 2030. The NDC also includes a target of 27% by 2030 conditioned on international support and supportive market mechanisms. The Vietnamese NDC expects greenhouse gas emissions from energy to almost double in the period 2020 to 2030 under a business-as-usual scenario. The estimated development within the sector calls for urgent actions to provide alternative pathways for low carbon development within energy production and industrial production.

In response to the NDC mitigation targets, the Government of Vietnam is engaged in ambitious plans for Energy Efficiency through the National Energy Efficiency Programme 3 (VNEEP 3) targets to reduce the national energy consumption by 5-7% by 2025 and 8-10% by 2030.

In partnership with Ministry of Industry and Trade (MOIT), DEA has identified a need to stimulate energy efficiency measures and investments in energy intensive industries by providing technical guidance for energy audits. Energy audits will provide site-specific guidance to a range of factories, thereby enabling the partner, with assistance from DEPP III, to identify cost efficiency measures to reduce energy consumption and CO2 emissions in a short to medium time perspective. Capacity development and training of national energy auditors and managers will be an integrated part of introducing energy audits in two provinces and building national expertise for further upscaling and replication. Energy audits and training of auditors will include aspects of just transition focusing on job creation and substitution from black to green jobs. The focus on the work force in Vietnam will be coupled with Danish Energy Agency's overall approach to support just transition.

The energy audits will provide in-depth knowledge and data that will help identify potentials of reducing energy consumption and reduce costs and CO2 emissions. The Danish Energy Agency 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 to support piloting the selected technologies in industrial/commercial facilities, support monitoring and evaluation after the investment has been made and make recommendation for scaling-up potentials.

In addition to providing technical guidance to energy intensive industries and capacity building of national auditors, the audits will contribute to and strengthen the three existing outputs for energy efficiency under DEPP III in Vietnam.

The three existing outputs are defined as:

- Energy efficiency legal framework developed and revised, and compliance with energy efficiency legal framework enforced at provincial level
- Energy efficiency incentive scheme for industry sector designed for selected enterprises in provinces, and the roadmap and action plan of finalized energy efficiency incentive scheme ready for approval
- Energy efficiency technology catalogues for industry and technical guidelines for selected industrial sectors developed, disseminated and application status assessed

Each of the three existing outputs under DEPP III will be strengthened by the energy audits, capacity development of trainers and influx of site-specific information and data regarding the most energy intensive industries in Vietnam.

The partnership is constructed around a steering committee, which governs DEPP III in Vietnam. Day-to-day technical work is carried out by staff of the Ministry of Industry and Trade, energy efficiency experts in the Danish Energy Agency, DEPP III long-term advisor at MOIT, international and local consultants, incl. energy auditors, enterprises and the ministry's staff at provincial level. The work is overseen by relevant management levels in the Danish Energy Agency, Danish Embassy in Hanoi and Ministry of Trade and Industry ensuring that the defined deliverables are met. Examples of the deliverables can be detailed

energy audit reports that can be used to monitor implementation and compliance of energy efficiency regulation at industrial and provincial level, assessment of the applicability of the envisioned incentive scheme and mapping of existing technologies to be replaced by best available technologies from the technology catalogue developed.

# 2. Theory of Change for additional support to DEPP III in South Africa, China 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 the three countries, 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 i) develop evidence-based policies or strategies supporting wind energy in China and South Africa; ii) improve regulation, planning- and implementation frameworks mitigating barriers to increased use of renewable energy and energy efficiency solutions in Vietnam, China and South Africa; and iii) enhance regulatory compliance of energy efficiency of energy intensive industries in Vietnam.

Enhancing the enabling environment for wind energy and energy efficiency measures, partner countries will be able to accelerate the deployment of wind energy and energy efficiency technologies. Increased wind energy will reduce the relative consumption of coal and other fossil fuels in the countries' energy-mix. Similar, increased energy efficiency will lower the relative energy consumption and thereby reduce the use of fossil fuels, in particular coal.

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, implements the Paris Agreement on Climate Change and continues upscaling and realising their NDC goals.

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

Figure 1 shows a visualization of the theory of change where additional outcomes and outputs are presented. Annex 1 provides the full and updated result framework.

Figure 1: Theory of Change illustration for new elements under DEPP III

Strategic Objectives	DEPP III sphere of influence		ightet næboral kovels are sæeling and ready are auton of rere welde emergy kand ing to box		
Country Objectives		China develops low carbon pathways related to energy in support of their NDC and China upscale NDC mitigation targets and related measures by 2025	Vietnam develops low carbon pathways related to energy in support of their NDC and Vietnam upscale NDC mitigation targets and related measures by 2025	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	Assumptions from Country Dojective to Strekagic Objective. Policy makes a repertore countries at bode sectored at the highest nethore levels are a seeling and mesty to adopt changes the promote energy field into yinch and generation of namenable amongs handing to low cathors are any generation and use.
Ī		11	1		
Outcomes	DEPP III sphere of influence	New outcome: NEA promotes and creates an enabling environment for lowering the cost of offshore wind power using best available practice in planning and cost reducing measures to continue the implementation of ambitious offshore wind targets at both national and provincial levels by 2025.  2 new outputs	Excisting 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 national and provincial level.  I new outputs under the existing outcome.	Existing outcome: Energy sector planning and polloy development, integrating renewable energy through a just transition with cost-effective measures of meeting polloy objectives.  I new output.	Assumptions from outcome to country elective.  Control we determine the country elective.  Cota and half to be inspected by supportionational charge election by partner countries MOC targets and partner pelid as and as straight and partner pelid as and as straight.  It is not allow and deligible to capacity development in partner by the distribution with continued application of methods legy and societies.  OPD and address of methods are controlled to the continued application of methods legy and societies.
		China	mentelV	South Africa	2

# 3. Result frameworks for the enhanced support

Outcomes for the additional support under climate envelope 2022 are presented below. The complete result framework for DEPP III, incl. the additional support is available in Annex I.

## 3.1. South Africa

The outcome indicator for the collaboration with the Department for Mineral Resources and Energy has been revised in order to capture the expected result of the WASA 4 engagement as well as support for just transition.

Engagement Title		Capacity [	Development on Renewable Energy Resource Assessment and				
		Procurement of Independent Power Production					
Outcome			Energy sector planning and policy development, integrating renewable energy through a just transition with cost-effective measures of meeting policy objectives				
Outcome indicator		assessme change m	tion of power system studies and sustainable renewable energy nent, particularly the Wind Atlas for South Africa, in line with climate mitigation targets and a just green energy transition and enable g large scale exploitation of wind power.				
Baseline	Year	2020	Integrated Resource Plan 2019 renewable energy targets do not incorporate just transition measures  REIPP procurement programme in place and seven rounds completed				
Mid-target		2023	Capacity for the collection of wind energy resource data enhanced  Revised procurement procedures increase efficiency and impact in line with sustainable development policy objectives				
Target		2025	Ability to realise power system planning 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.				

## 3.2. China

The outcome with NEA is additional and will be incorporated into DEPP III in China.

Engagement Title	Enabling a better regulatory framework in the offshore wind sector with NDRC's
	National Energy Administration (NEA).
Outcome	NEA promotes and creates an enabling environment for lowering the cost of
	offshore wind power using best available practice in planning and cost reducing

		measures to continue the implementation of ambitious offshore wind targets at both national and provincial levels by 2025.			
Outcome indicator		five-year coherent	delevant policy measures from the intervention are identified and included in live-year planning efforts that contributes to the promotion of a comprehensive, oherent and cost-effective approach that meets best available practice for offshore wind that contributes to meeting political targets.		
Baseline	Year	2021	Quantitative focus on installed capacity and a disconnect between long-term national targets and ruched developments efforts at the provincial level.		
Mid-target		2023	Policy recommendations for framework conditions for offshore wind at the national level has been enhanced, while provincial engagements are in development.		
Target		2025	Policy recommendations for meeting national and provincial targets for offshore wind has been aligned, and included in the 15 <sup>th</sup> five-year plan.		

## 3.3. Vietnam

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

<b>Engagement Title</b>		Low carbon development in the industrial sector				
Outcome		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	- Compliance with energy efficiency legal framework for industrial sector				
	2020	is limited at provincial level				
		<ul> <li>Energy efficiency incentive schemes for industry are absent</li> </ul>				
Target	Year	- Compliance with energy efficiency legal framework for industrial sector				
	2025	improved at provincial level				
		- Energy efficiency incentive scheme ready for approval by the competent				
		authorities and application for adoption in National Energy Efficiency				
		Action Plan submitted				

# 4. Brief analyses of the partners

## 4.1. South Africa

In South Africa, the DEPP III will strengthen the partnership with the Department of Mineral Resources and Energy (DMRE). 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 their implementation to ensure energy security;

promotion of environmentally friendly energy and access to affordable and reliable energy for South Africa DMRE is the primary government partner under DEPP III.

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) 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. The additional support to DMRE and the partnership regarding WASA 4 is anchored within DMRE Chief Directorate of Renewable Energy Projects, which is a unit under DMRE responsible to renewable energy. The Chief Directorate of Renewable Energy Projects has successfully been in charge of the previous phases of WASA.

### 4.2. China

The Sino-Danish partnership on offshore wind is anchored with the National Energy Administration (NEA), which is a vice-ministerial body under the jurisdiction of the National Development and Reform Commission (NDRC). The NEA drafts and implements energy development strategies, energy plans, energy industry policies and energy reforms. NEA is also responsible for the national offshore wind power development and construction management.

While NEA is responsible for the overall build out of offshore wind at the national level, the marine administrative department in the Ministry for Natural Resources (MNR) is responsible for the management and supervision of sea area use, island protection and environmental protection during the development and construction of offshore wind power. The Ministry of Ecology and Environment (MEE) is responsible for protecting marine environmental and ecology including implementation of the ecological red line system in the marine environment and establishment of ecological protection zones. As part of the centre of excellence for offshore wind, DEPP III will facilitate dialogue between NEA, MNR, MEE as well as the provincial Energy Bureaus subordinated the Provincial Development and Reform Commission (PDRC) in order to promote the further uptake of offshore wind energy.

China Renewable Energy Engineering Institute (CREEI) is under the auspices of Power China (a State Owned Enterprise controlled by SASAC) and operates as adviser to NEA in several matters. Over the latest three years, NEA has leaned more and more from CREEI when it comes to foreign cooperation including the Strategic Sector Cooperation with Denmark.

#### 4.3. Vietnam

The partner for the additional support in Vietnam on energy efficiency is the Ministry of Industry and Trade (MOIT). 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 Energy Efficiency Program 3, 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. A full analysis of the partner is available in the DEPP III Country Programme Document for Vietnam.

# 5. Overall budget at outcome-level

The budget for additional funding to DEPP III in South Africa, China and Vietnam is presented in table 1 below. The currency is DKK.

South Africa						
Outcome 1 - Capacity Development on Renewable Energy Resource Assessment and Procurement of						
Independent Power Production						
	2022	2023	2024	2025	Total	
Output 1 - Capacity strengthened to conduct power system studies and wind resource assessment 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.	3,750,000	3,750,000	3,750,000	3,750,000	15,000,000	
Total	3,750,000	3,750,000	3,750,000	3,750,000	15,000,000	

China					
Outcome - NEA promotes and creates an enabling environment for lowering the cost of offshore wind					
power using best available practice in plant	ning and cost	reducing me	easures to co	ntinue the	
implementation of ambitious offshore wind	d targets at b	oth national	and provinc	ial levels by 2	2025.
	2022	2023	2024	2025	Total
Output 1. A Sino-Danish Centre of	1,332,060	1,776,080	1,776,080	1,480,066	6,364,286
Excellence for Offshore Wind is					
established.					
Output 2. Policy recommendations	740,033	986,711	1,086,711	822,259	3,635,714
supporting a Levelized Cost of Energy					
(LCoE) approach on planning including					
Maritime Spatial Planning, auction					
design, support-schemes and					
demonstration project concept for one or					
two provinces, in a format ready for					
implementation in other provinces.					
Total	2,072,093	2,762,791	2,862,791	2,302,326	10,000,000

Vietnam						
Outcome - 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						
	2022	2023	2024	2025	Total	
Output 4	2,200,000	2,200,000	2,200,000	2,200,000	8,800,000	
Output 5	2,200,000	2,200,000	2,200,000	2,200,000	8,800,000	
Output 6	2,200,000	2,200,000	2,200,000	2,200,000	8,800,000	

Total	6,600,000	6,600,000	6,600,000	6,600,000	26,400,000*
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In addition to the country-specific budgets as presented above, DEPP III will be strengthen by an unallocated reserve of 5 million DKK. The unallocated funds will allow existing partners to apply for support to interventions beyond their approved results framework, when an unforeseeable and strategic opportunity arises during program implementation. As for DEPP III, 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.

Total budget allocations for the enhanced support to DEPP III partnerships:

Country	Budget allocation as part of the additional support		
	(in DKK)		
South Africa	15,000,000		
China	10,000,000		
Vietnam	26,400,000		
Unallocated	5,000,000		
Total	56,400,000		

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

# 6. Management and reporting

Management and reporting of the proposed additional activities will follow the overall structure of DEPP III.

The DEPP III Advisory Group is overseeing implementation of the programme in all four countries and consists of MFA and The Danish Ministry of Climate, Energy and Utilities and with DEA as secretary. The Advisory Group will meet on a bi-annual basis, or when required, to discuss programme progress and solicit lesson learnt from cross-programme countries experience. The Advisory Group 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 to mobilise unallocated programme funds

The country steering committees are co-chaired by partner country representatives and the Danish Ambassador in the country. In China each engagement has their own Steering Committee co-chaired by the head of the engagement institution and a representative from DEA. 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 annual work plans and the Annual Partnership Country Programme progress report as well as being a forum for policy dialogue.

Implementation Groups coordinate and manage daily implementation of the annual work programmes. The members are representatives from partner institutions, DEA, Long Term Advisor and Energy Sector Counsellor. The Implementation Group will meet at least twice per year and has 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, 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 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 Board.

# 7. 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 either as existing partners under DEPP III or under the SSC project on offshore wind in China. Previously engagements have been largely successful and all partners involved in the additional engagements have reaffirmed their support to continue to engage with Denmark 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.

#### 7.1. South Africa

- COVID-19 has greatly affected South Africa and may continue to affect programme
  implementation. New working methods during 2020-21 based on video conferences will continue
  to mitigate the impact of restriction on missions visiting the country. However, the WASA4 project
  is dependent on the ability to make physical measurements. These may be hampered by possible
  restrictions on travels and meetings. The risk is estimated as high.
- Difficulties in attaining permits from landowners 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 measure campaign ends and permits
  are only required during the actual implementation of the WASA 4. During WASA 1-3, permits to
  access land and roads have been secured by short-term lease 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.
- The consortium implementing WASA 4 is well established and has been successful under previous phases of WASA. The interest and focus from DMRE is high. Risks connected to failure of the consortium are considered to be low.

#### 7.2. China

- The Covid-19 pandemic has severely limited travelling to China for DEA and international consultants. It is uncertain when the situation will change. Missions to China are likely not to be possible during the initial phase of the project (spring 2022). The impact of the risk will be mitigated by the adjusting the work plans of energy sector advisors at the Danish embassy as well as local consultants. Another mitigating factor is the long-term and well-established partnership with NEA which is essential when operating under the limitations of Covid-19.
- Poor coordination between CREEI and NEA/NDRC prevents the Centre of Excellence to effectively
  support national and regional authorities work and further development of offshore wind. The risk
  may have high consequences for the DEPP III in general. However, based on DEA experience from
  working with NEA during 2021 the risk is considered unlikely. A mitigating factor is the highly
  functional high-level working group with NEA, which governs the programme and ensure domestic
  coordination.

#### 7.3. Vietnam

- Covid-19 restrictions have affected and still affect international travel to Vietnam and thus the
  ability of the DEA and international consultants to support the project on the ground. Extensive use
  of video conference and increased use of local consultants mitigate the impact of the risk on
  project implementation.
- A key risk factor is a potential lack of available finance on the commercial marked 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. The industry can use
  the findings from the energy audits in order to mobilize funding. The residual risk is considered as
  low.

# 8. Proposed Annexes

- 1. Programme document for DEPP III (only for submission to UPR)
- 2. Result framework for DEPP 3 including additional outcomes and outputs (outputs to be developed)
- 3. Budget details
- 4. Risk Management
- 5. Process Action Plan
- 6. Appraisal summary and recommendations (after appraisal)

## Annex I. DEPP III programme document

# Annex 2. Results framework for DEPP III including proposed new outcomes and outputs

New outcome/outputs 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. Output 1 is additional and reflects the expected results from WASA.

Engagement Title		Capacity I	Development on Renewable Energy Resource Assessment and					
		Procurement of Independent Power Production (development engagement 1)						
Outcome 1	Outcome 1		Energy sector planning and policy development, integrating renewable energy					
		objectives	just transition with cost-effective measures of meeting policy s					
Outcome 1 in	dicator	Application	on of power system studies and sustainable renewable energy					
		assessme	nt, particularly the Wind Atlas for South Africa, in line with climate					
		change m	itigation targets and a just green energy transition and enable planning					
		of large scale exploitation of wind power.						
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.					

Engagement Title	Capacity Development within Electricity Supply Commission on strategy and			
	planning			
Outcome 2	Regulatory framework, institutional development, grid and energy system energy			
	lanning support effective transition to a liberalized market with a rising share of			
	electricity from variable renewable energy sources			
Outcome indicator	- Institutional framework conditions developed			

		<ul> <li>Energy modelling scenarios applied to support the cost-effective market transformation and expansion of variable renewable energy</li> <li>Planning tools and operational procedures developed</li> </ul>				
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				

Engagement t	itle	Capacity Development for Renewable Energy Integration into the Power System (development engagement 3)				
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 indic	cator	<ul> <li>Recommended amendments, enhancements and actions proposed on technical regulations (grid codes)</li> </ul>				
		<ul> <li>% reduced curtailment and % increased uptake in variable renewable energy</li> </ul>				
		- 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.				

## China

DEPP III in China was designed with two outcomes and six underlying outputs. Based on the integration of the Offshore Wind project into DEPP III, an additional and third outcome has been developed. The third outcome has two underlying outputs.

Engagement T	itle	Enabling a	Enabling advanced energy system modelling with NDRC's Energy Research				
		Institute (	I) (Development engagement 1)				
Outcome 1		Energy Re	search Institute provides well informed, coordinated, and data				
		validated	information for low carbon energy strategies, targets, policies and				
		planning	at both national and provincial levels by 2025.				
Outcome indic	cator	Publication	on of a China Energy Outlook (CEO), providing a low carbon pathway for				
		the entire	ire energy sector, and with coherent national- and provincial-level				
		recomme	endations supported by the publication of a Provincial Energy Outlook				
		(PEO) in a	O) in a relevant province in China.				
Baseline	Year	2020 National-level Chinese Renewable Energy Outlook published.					
Mid-target		2023	China Energy Outlook published with modelling and policy				
			recommendations for the entire energy sector, while methodologies				
			for a Provincial Energy Outlook are in development.				
Target	2025		Annual China Energy Outlook recognized as one of the main bases for				
			energy policy development, while the methodology for Provincial				
			Energy Outlooks development is widely recognized as the main tool				
			for aligning national and provincial energy targets and ready to be				
			replicated in other provinces.				

		Enhancing the capacity to align climate and energy policies at a local and national						
level of C			hina with MEE (Development Engagement 2)					
Outcome 2		Ministry o	of Economy and Environment has capacity to update and improve low					
		carbon pa	carbon pathways, at a local and national level utilizing international experiences					
		is enhanc						
Outcome indi	cator	Low carbo	on pathways are improved at a national as well as a local level, relevant					
		policy measures are identified and included in five-year planning efforts						
			, , ,					
Baseline	Year	2020	Limited knowledge about climate change and options for mitigation a					
			a national and local level.					
	Year	2023	Challenges and risks posed by climate change is accepted within local					
			EEs and pathways for mitigation within the energy sector has been					
			identified and is generally accepted as a prerequisite for sustainable					
			economic growth in selected provinces.					
Target	get Year 2025		Sub-national low-carbon pathways are updated and improved in pilo					
			region or province. Relevant policy measures on low carbon pathways					
			are adopted in selected provinces as part of the local five-year					
			planning.					

Engagement Title	Enabling a better regulatory framework in the offshore wind sector with China's
	National Energy Administration (NEA) (Development Engagement 3).
Outcome 3	National Energy Administration promotes and creates an enabling environment
	for lowering the cost of offshore wind power using best available practice in
	planning and cost reducing measures to continue the implementation of
	ambitious offshore wind targets at both national and provincial levels by 2025.
Outcome indicator	Relevant policy measures from the intervention are identified and included in
	five-year planning efforts that contributes to the promotion of a comprehensive,

		coherent and cost-effective approach that meets best available practice for offshore wind and that contributes to meeting political targets.				
Baseline	Year	2021	Quantitative focus on installed capacity and a disconnect between long-term national targets and ruched developments efforts at the provincial level.			
Mid- term target		2023	Policy recommendations for framework conditions for offshore wind at the national level has been enhanced, while provincial engagements are in development.			
Target		2025	Policy recommendations for meeting national and provincial targets for offshore wind has been aligned and included in the 15 <sup>th</sup> five-year plan.			

#### Vietnam

DEPP III in Vietnam is designed with three outcomes and eight underlying outputs. The efforts to support energy efficiency is captured in the third outcome which contains three existing outputs. As part of the enhanced support to energy efficiency, the third outcome has been strengthen with an additional fourth output capturing the expected results from the energy audits. In addition to the additional output, the energy audits are expected to strengthen and validate the three original outputs supporting energy efficiency.

Engagement Title		Capacity Development for long-range energy sector planning (development					
		engagement 1)					
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 indic	ator	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	- EOR issued biennially with projections for different development paths of					
	2020	energy sector development					
		- EREAs capacity on offshore wind is limited					
Target	Year	- The biennial EOR is used as the main vehicle to evaluate, revise and raise					
	2025	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					

Engagement Title	Capacity Development for Renewable Energy Integration into the Power System
	(development engagement 2)
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	<ul> <li>Ancillary services deployment and evaluation with reliant of electricity market stakeholders for variable renewable energy integration is governed by enhanced regulatory framework.</li> <li>Increased variable renewable energy integration, system flexibility that rely on variable renewable energy forecasting, and enhanced system stability</li> </ul>			

Engagement Title		Low carbon development in the industrial sector (development engagement 3)				
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 indi	cator	Energy Efficiency regulatory framework under effective implementation at				
		national and provincial level and incentive schemes in place for industries				
Baseline	Year	- Compliance with energy efficiency legal framework for industrial sector is				
	2020	limited at provincial level				
		- EE incentive schemes for industry are absent				
Target	Year	- Compliance with energy efficiency legal framework for industrial sector				
2025		improved at provincial level				
		- EE incentive scheme ready for approval by the competent authorities				

# Annex 3. Updated budgets for the three DEPP III countries

## **South Africa**

Development Engagement 1	2020	2021	2022	2023	2024	2025	Total
Output 1:wind resource assessment	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 RE	185,913	1,115,480	1,115,480	1,115,480	1,115,480	929,567	5,577,400
	768,225	4,609,350	4,609,350	4,609,350	4,609,350	3,841,125	23,046,750
Development Engagement 2							
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
	608,848	3,653,090	3,653,090	3,653,090	3,653,090	3,044,242	18,265,450
Development Engagement 3							
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
	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

<sup>\*</sup>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.

## China

China DEPP III	2020	2021	2022	2023	2024	2025	Total
DE1: Enabling advanced energy system modelling							
Output 1: Energy System Modelling	434,577	2,607,460	2,607,460	2,607,460	2,607,460	2,199,550	13,063,967
Output 2: Provincial Energy Outlook	316,940	1,901,640	1,901,640	1,901,640	1,901,640	1,608,033	9,531,533
Output 3: Power System Flexibility and RE Integration	307,213	1,843,280	1,843,280	1,843,280	1,843,280	1,516,067	9,196,400
Output 4: Dissemination of Research Results	117,637	705,820	705,820	705,820	705,820	591,517	3,532,433
Sub-total for DE1	1,176,367	7,058,200	7,058,200	7,058,200	7,058,200	5,915,167	35,324,333
DE2: Enhancing the capacity to align climate and energy policies							
Output 1: Capacity development on energy policy	162,500	975,000	975,000	975,000	975,000	790,833	4,853,333
Output 2: Energy and climate policy alignment	87,500	525,000	525,000	525,000	525,000	425,833	2,613,333
Sub-total for DE2	250,000	1,500,000	1,500,000	1,500,000	1,500,000	1,216,667	7,466,667
DE3: Enabling a better regulatory framework in the offshore wind sector with NDRC's National Energy Administration (NEA)							
A Sino-Danish Centre of Excellence for Offshore Wind is established.			1,332,060	1,776,080	1,776,080	1,480,066	6,364,286
Policy recommendations supporting a Levelized Cost of Energy (LCoE) approach on planning including Maritime Spatial Planning, auction design, support-schemes and demonstration project concept for one or two provinces, in a format ready for implementation in other provinces.			740,033	986,711	1,086,711	822,259	3,635,714
Sub-total for DE3			2,072,093	2,762,791	2,862,791	2,302,326	10,000,000
LTA							
LTA:ERI	0	1,400,000	1,400,000	1,400,000	1,400,000	1,166,667	6,766,667
LTA:MEE	0	0	0	1,400,000	1,400,000	700,000	3,500,000
	0	1,400,000	1,400,000	2,800,000	2,800,000	1,866,667	10,266,667

Total	1,426,367	9,958,200	12,030,293	14,120,991	14,220,991	11,300,827	63,057,667

## Vietnam

Vietnam DEPP III							
Development Engagement 1: Capacity Development for long-range energy sector planning	2020	2021	2022	2023	2024	2025	Total
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
	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							
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
	588,333	3,530,000	3,530,000	3,530,000	3,530,000	2,941,667	17,650,000
Development Engagement 3: Low carbon development in the industrial sector							
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

Total	2,009,699	12,058,199	18,658,199	18,658,199	18,658,199	16,648,500	86,691,001
	684,999	4,109,999	10,709,999	10,709,999	10,709,999	10,025,000	46,950,001
LTA	233,333	1,400,000	1,400,000	1,400,000	1,400,000	1,166,667	7,000,000
Output 4: Focused technical assistance and energy audits delivered to energy intensive industries through pilot projects in provinces for implementing energy efficiency measures and to comply with the energy efficiency legal framework.			6,600,000	6,600,000	6,600,000	6,600,000	26,400,000

# Annex 4. 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.	Likely	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. Elections or even changes of personnel in influential positions may cause government to reexamine energy policy. This would affect DMRE more than other partners. For this reason the programme has been designed to allow relatively easy adjustment of the activities and redistribution of funds between development engagements if necessary. In addition, policy dialogue and dissemination of programme outputs will raise awareness	Medium	The NDP 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. These influences may prevail if the benefits of clean energy do not become apparent quickly. DEPP III will however deliver almost immediate advantages in terms of volume and security of power supply and will emphasise these benefits throughout implementation.

			of the economic and social justice aspects of the programme, as well as the climate and environmental benefits. The risk will be monitored and contingency plans to pause or restructure the development engagements will be prepared as necessary.		
External economic dislocations or internal financial disruption (inflation, foreign debt, currency crisis etc.).	Likely	Significant	Financial crises could lead to staff lay-offs, non-payment of staff followed by absenteeism or strikes, lack of operational funds etc.  Much of the programme is focussed on securing and increasing electricity supply which would become even more important during a crisis. Nevertheless, if the government were temporarily to become dysfunctional, the main response would be to monitor the situation closely and if necessary to suspend or temporarily postpone some activities until the situation had resolved itself.	Minor	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 or sectors such as tourism which is an important contributor to foreign exchange income. Eskom has massive external debts and is on the verge of bankruptcy.  Planning and budgeting would be made difficult but with the power sector being important to continued development of South Africa, the likelihood that crises would be allowed to disrupt the sector significantly is seen as being relatively small.
The corona pandemic may cause severe economic disruption.	Likely	Significant	The main response would be to monitor the situation closely and to engagement with partner and other stakeholders to display	Major	Economic disruption, if severe, could last for months or longer will have a significant impact on government's and the private sector's investment in renewable energy and energy efficiency. Sustainable recovery from the

			potential for sustainable recovery as part of low carbon development. Assistance towards sustainable recovery will include a keen focus on job creation and security of supply of electricity.		Covid-19 may include national stimuli packages where investments can be directed towards renewable energy.
			The programme will closely monitor volatility of oil prices and provide targeted		Low oil prices will not have a direct influence in South Africa's revenue as the country is a netimporter of oil.
Low global prices of oil.	Medium	Insignificant	assessments of the financial and technical potential of renewable energy compared to oil in sectors where this is relevant.	Minor	Nonetheless, low oil prices may challenge the comparative advantage presented by renewable energy and energy efficiency and/or motivate investments in oil based technologies.

## **Programmatic risks**

Risk Factor	Likelihood	Impact	Risk response	Residual Risk	Background to assessment
Poor political commitment, and therefore lack of action, to retain low carbon development.	Likely	Significant	Continue support and dialogue with the Government, and through targeted engagements that support a long-term sustainability and a low carbon path, whilst demonstrating immediate benefits in terms of reliability of supply. The risk will be monitored and contingency plans to pause or restructure the development	Major	The government has submitted NDC with moderate ambitions, to be revised by 2020. 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

			engagements will be prepared as necessary.		the jobs of approximately 80,000 employees in the coal mining sector.
					A risk is that the government, after elections, or because of reorganisation, in the face of internal political pressure, will want to reexamine 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.
Lack of capacity and ownership to the cooperation from key partners.	Likely	Significant	Programme design has been adjusted to spread the risk among several partners and to facilitate transfer of resources to more active partners and/or engagements where necessary. Causes of the difficulties with partners will be investigated and addressed.	Major	Some of the partners from DEPP II have been difficult to engage due to other priorities, but new political leadership and a pending reorganisation seem to have solved the problems and clear commitment to the new programme has been communicated.
Overlap of activities with other Development Partners in the sector and overloading of partners capacity	Unlikely	Insignificant	The RDE is active in coordination of development activities together with relevant ministries and other development partners. GIZ works with the same organisations (i.e. with DMRE and Eskom) but an ongoing dialogue is in place to avoid conflict or overlap, and to ensure activities are in complementary areas.	Minor	Many development partners are seeking to cooperate in the energy sector. Generally, there are more needs in the sector than can be provided by the DPs combined, but support needs to be coordinated and distributed strategically to get the most value. There has been ongoing detailed dialogue with the DPs as well as the programme partners, to avoid duplication or overloading.

The Covid-19 pandemic results in limited travel by DEA and availability of partners.	Very likely	Significant	DEPP II has demonstrated a valuable ability perform its activities virtually while connecting with partners online. However, the WASA4 project is dependent on the ability to make physical measurements. These may be hampered the spread of the virus and possible restrictions.	Moderate	Restricted travel to South Africa for the DEA and other stakeholders engaged in the WASA project will be critical. DEA and supportive implementing partners will overcome this by using local expertise, Long-Term Advisors Sector Advisor in South Africa.
Difficulties in attaining permits from landowners may affect the ability to erect the measurement masts	Unlikely	Significant	DEA will work with DMRE and other local stakeholders in order to make sure, that landowners support the WASA project. Support will be achieve via information sharing regarding the project, objective, time period, etc.	Minor	During WASA 1-3, permits to access land and roads have been secured by short-term lease contracts with landowners. If access 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 programme could fail to deliver its outcomes, which will reflect negatively on DEA, MCEU, and the MFA.	Likely	Insignificant	Learning from DEPP II, where slow take-up of the assistance in DoE, the programme has been designed to allow flexible transfer of resources from one partner to another in DE1. Close monitoring of DE1 and following up the dialogue at ministerial level will ensure that any delays	Minor	The programme is strategic and is of major importance to the partner institutions but there are many other actors whose actions have a bearing on the sector and the mitigation of CO <sub>2</sub> emissions. Complete failure is unlikely, and delays in meeting targets could not realistically be attributable to Danish cooperation. Even if it were, this would be unlikely to damage the reputation of the Danish partners.

are limited and met with prompt remedial action. The theory of change and results framework with SMART indicators to the extent possible has realistic and measurable targets. A stakeholder platform and effective communication strategy will ensure that results, achievements and any difficulties or drawbacks are communicated effectively to key audiences, so that news of any potential difficulties is counterbalanced with information on the achievements and success stories in other areas. As Denmark has a strong resource base in The partners are aware of the strengths of the Danish renewable energy, energy efficiency and private sector and for the climate change mitigation, and all of the There could be most part see this as one of programme countries present attractive unrealistic markets for renewable energy in the coming the potential benefits of the expectations of programme. The private decades, there are expectations that the opportunities for Insignificant sector will be kept informed cooperation will give rise to commercial Unlikely Minor Danish private of the progress being made opportunities. This general issue is part of the sector commercial and will have an opportunity Program concept and is generally welcomed by interests related to partners as an additional benefit of the to comment and to advise the cooperation. on any adjustments that cooperation. may help remove barriers to investment.

Partners external to DEA could engage in fraud, corruption or human rights violations under activities funded or facilitated by the programme.	Unlikely	Significant	The programme will follow Danida and DEA financial procedures and the risk of direct corruption is considered unlikely. Where pilot projects are included in programme activities, 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.	Minor	Any corruption, violations of human rights or environmental damage related to programme activities could negatively affect the reputation of implementing and funding partners. The programme implementation modality involves skills transfer and institutional capacity development. All activity is with the staff of central government institutions so there is no potential for human rights violations. Since the budget is in control of the DEA, mainly allocated for technical assistance from Denmark and only limited funds available to be spent in country the impact of corruption on implementation will be insignificant.
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.

China

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

Risk Factor	Likelihood	Impact	Risk response	Residual Risk	Background to assessment
Government will introduce policies that change development priorities.	Unlikely	Significant	Many of the programme activities will remain relevant under any feasible development scenario. It may become necessary to adjust the activities and rebalance distribution of funds between development engagements under some scenarios	Minor	China has strong government buy-in to cleaner energy policies and strong external incentives (air pollution, energy security) to pursue cleaner energy, apart from climate change. China has shown itself to adopt a long-term strategic approach to policy formulation and the credibility of China as a leading economic force would be damaged by a reversal of energy and climate policy.
External economic dislocations or internal financial disruption (inflation, foreign debt, currency crisis etc.).	Likely	Insignificant	The main response would be to monitor the situation closely and if necessary to suspend or temporarily postpone some activities until the situation had resolved itself.	Minor	Planning and budgeting would be made difficult but with the power sector being important to continued development the likelihood that crises would be allowed to disrupt the sector significantly is seen as being relatively small.
The corona pandemic may cause severe economic disruption	Likely	Significant	The main response would be to monitor the situation closely and to engagement with partner and other stakeholders to display potential for sustainable recovery as part of low carbon development. Assistance	Major	Economic disruption, if severe, could last for months or longer will have a significant impact on government's and the private sector's investment in renewable energy and energy efficiency. Sustainable recovery from the Covid-19 may include national stimuli packages where investments can be directed towards renewable energy.

			towards sustainable recovery will include a keen focus on job creation and security of supply of electricity.		
Low global prices of oil	Medium	Insignificant	The programme will closely monitor volatility of oil prices and provide targeted assessments of the financial and technical potential of renewable energy compared to oil in sectors where this is relevant.	Minor	Low oil prices will not have a direct influence in China's revenue as the country is a netimporter of oil.  Nonetheless, low oil prices may challenge the comparative advantage presented by renewable energy and energy efficiency and/or motivate investments in oil based technologies.

## Programmatic risks

Risk Factor	Likelihood	Impact	Risk response	Residual Risk	Background to assessment
Poor political commitment, and therefore lack of action, to retain low carbon development	Unlikely	Significant	Continue support and dialogue with Government, and through targeted engagements that support a long-term sustainability and a low carbon path, whilst demonstrating immediate benefits in terms of reliability of supply.	Moderate	China has submitted INDC with moderate ambitions, to be revised by 2020. Government public statements and policy remain strongly in support of clean energy transition.  Nevertheless, there has been political concern at both national and provincial level that the shift to low carbon pathways, in particular renewable energy, will lead to socio-economic impacts in terms of loss of jobs and reducing in GDP growth.
Staff turnover, or lack of capacity and ownership to the cooperation from key partners.	Unlikely	Significant	Partners continue to show commitment and willingness to commit resources. High level engagement has shown that this commitment extends to the highest levels of policy formulation.	Minor	China's ownership has been demonstrated through DEPP II and continues to remain steadfast. Major achievements arising from DEPP II have confirmed the value of the cooperation to high level policy makers. Demand is high and the risk is mitigated

					through a flexible approach to provision of technical input.
Overlap of activities with other Development Partners in the sector and overloading of partners capacity	Unlikely	Insignificant	There is DP coordination at embassy level and coordination of international cooperation by partners at sector level.	Minor	Many development partners (DPs) are seeking to cooperate in the energy sector China but the success of the DEPP programmes has placed them at a significant advantage over other potential partners. Generally, there are more needs in the sector than can be provided by the DPs combined, but support needs to be coordinated and distributed strategically to get the most value. Chinese authorities are very systematic and selective in assessing whether to engage in cooperation with external partners.
MEE has a broad range of focuses on climate change and may shift priorities to topics that go beyond the expertise and experience that can be provided by DEA. This can result in reduced interest and participation in the capacity development	Likely	Significant	DEA can mobilise inputs from the entire Danish resource base. All the energy and climate topics that could be prioritised in China can be addressed with state-of the- art Danish expertise.	Minor	The residual risk is minor since the demand on MEE to deliver data to inform development of the Chinese NDCs is high, and DEA has proven ability to help them meet this demand
Poor coordination between divisions within	Likely	Significant	A long-term adviser based in ERI will provide coordination of technical input to 7 divisions within ERI and the centre	Minor	The residual risk is minor since with the assistance of the LTA, ERI's management will coordinate all activities between the divisions and is fully aware of any DEA activity.

ERI prevent progress					
Low carbon pathways are developed but not implemented	Likely	Significant	Capacity development efforts will include local representatives of the MEE in professional discussions with other parts of the local Government	Moderate	The areas of responsibility of the Chinese authorities are very strictly separated, and even though local representatives of the MEE are responsible for local low carbon development roadmaps, they are not responsible for implementation. By ensuring that these local officials are able to advise and monitor implementation, the risk is reduced to "moderate".
The Covid-19 pandemic results in limited travel by DEA and availability of partners.	Very likely	Significant	The risk is mitigated by the utilization of energy sector counsellor at the Danish embassy as well as local consultants. Another mitigating factor is the long-term and well-established partnership with NEA which is essential when operating under the limitations of Covid-19.	Moderate	Restricted travel by DEA to partner countries which may compromise the level of engagement with partners. Similarly, Covid-19 lock down may affect partner institutions operational and day-to-day engagement in the programme if staff are working from home.
Poor coordination between CREEI and NEA/NDRC prevents the Centre of Excellence to effectively support national and regional authorities in further	Unlikely	Significant	A mitigating factor is the highly functional high-level working group with NEA which governs the programme and ensure domestic coordination.	Minor	Lack of institutional cooperation between Chinese authorities is a well-known challenge in China. The DEA will monitor the internal collaboration closely and engage with the high-level working group if institutional barriers prevent the Centre in operating effectively.

## **Institutional risks**

Risk Factor	Likelihood	Impact	Risk response	Residual Risk	Background to assessment
The programme could fail to deliver its outcomes, which will reflect negatively on DEA, MCEU, and the MFA.	Unlikely	Insignificant	The theory of change and results framework with SMART indicators to the extent possible has been designed with realistic and measurable targets. A stakeholder platform and effective communication strategy will ensure that results, achievements and any difficulties or drawbacks are communicated effectively to key audiences.	Minor	The programme is strategic and is of major importance to the partner institutions but there are many other actors whose actions have a bearing on the sector and the mitigation of CO <sub>2</sub> emissions. Complete failure is unlikely, and delays in meeting targets could not realistically be attributable to Danish cooperation. Even if it were, this would be unlikely to damage the reputation of the Danish partners.
There could be unrealistic expectations of opportunities for Danish private sector commercial interests related to the cooperation.	Unlikely	Insignificant	The partners are aware of the strengths of the Danish private sector and for the most part see this as one of the potential benefits of the programme. The private sector will be kept informed of the progress being made and will have an opportunity to comment and to advise on any adjustments that may help remove barriers to investment.	Minor	As Denmark has a strong resource base in RE, EE and climate change mitigation, and China presents attractive markets for RE in the coming decades. There are expectations that the cooperation will give rise to commercial opportunities. This general issue is part of the Programme concept and is generally welcomed by partners as an additional benefit of the cooperation.

Partners external to DEA could engage in fraud, corruption or human rights violations under activities funded or facilitated by the programme.

Unlikely Significant

The programme will follow DEA financial procedures and the risk of direct corruption is considered unlikely. Human rights violations, however, are known to occur in China and activities at provincial level may involve interactions with minority or marginalised populations. Where pilot projects are included in program activities, 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.

Minor

Any corruption, violations of human rights or environmental damage related to programme activities could negatively affect the reputation of implementing and funding partners. The Cooperation centres on peer-to-peer skills transfer and institutional capacity development. There may be some instances where innovations are tested at provincial level. These would not be funded by Denmark but could be said to be instigated or a direct result of the cooperation. Denmark could thus share the blame for any untoward behaviour in the selection or conduct of the pilots. Since the budget is in control of the DEA, mainly allocated for TA provision from Denmark and only limited funds available to be spent in country the impact of corruption on implementation will be insignificant

## Vietnam

Updated risk matrix for DEPP III in Vietnam. 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 change development priorities, moving away from green growth and allowing energy intensity to continue its upward trajectory	Unlikely	Significant	Many of the programme activities will remain relevant under any feasible development scenario. It may become necessary to adjust the activities and rebalance distribution of funds between development engagements under some scenarios	Medium	In Vietnam rapid growth and industrialization have significantly degraded the environment. Air pollution in cities is a major public health problem, much of it caused by energy production. Final energy consumption tripled over the past decade, and energy intensity of GDP has been steadily increasing.  Compounding the problem is the reality that much of Vietnam's population and economy is highly vulnerable to climate impacts. The Government is aware of the issues and that addressing these challenges removes threats to economic wellbeing as well as presenting opportunities to contribute to growth. It has shown strong approval of the outcome of DEPP II and every indication that continued cooperation will be highly valued. The policy direction is firmly entrenched and well understood by major stakeholders and civil society. The government is stable and unlikely to be replaced during the next few years. In this context, sudden changes of policy direction are unlikely.
External economic	Unlikely	Insignificant	The main response would be to monitor the situation	Minor	Planning and budgeting would be made difficult but with the power sector being
dislocations or	o minery		closely and if necessary to		important to continued development the

internal financial disruption (inflation, foreign debt, currency crisis etc.).			suspend or temporarily postpone some activities until the situation had resolved itself.		likelihood that crises would be allowed to disrupt the sector significantly is seen as being relatively small.
The corona pandemic may cause severe economic disruption	Likely	Significant	The main response would be to monitor the situation closely and to engagemen with partner and other stakeholders to display potential for sustainable recovery as part of low carbon development. Assistance towards sustainable recovery will include a keen focus on job creation and security of supply of electricity.	Major	Economic disruption, if severe, could last for months or longer will have a significant impact on government's and the private sector's investment in renewable energy and energy efficiency. Sustainable recovery from the Covid-19 may include national stimuli packages where investments can be directed towards renewable energy.
Low global prices of oil	Medium	Insignificant	The programme will closely monitor volatility of oil prices and provide targeted assessments of the financial and technical potential of renewable energy compared to oil in sectors where this is relevant.	Minor	Low oil prices will not have a direct influence in Vietnam as the country is a netimporter of oil.

## Programmatic risks

Risk Factor	Likelihood	Impact	Risk response	Residual Risk	Background to assessment
Poor political	Halikaly	Significant	Continue support and dialogue	Minor	DEPP II has yielded results that the
commitment,	Unlikely	with Gov	with Government, and through	Minor	Government of Vietnam has approved at the

and therefore lack of action, to retain low carbon development			targeted engagements that support a long-term sustainability and a low carbon path, whilst demonstrating immediate benefits in terms of improved security of energy supply.		highest levels. Productive policy dialogue between Danish and Vietnamese policy makers is ongoing and the Vietnamese authorities have allowed publication of the Energy Outlook report which allows institutional stakeholders to examine and critique energy policy. All of these show a deep commitment to low carbon growth which extends to the highest levels of government.
Lack of capacity and failure to commit sufficient resources to the cooperation from key partners.	Likely	Insignificant	Programme design has been adjusted to make expert visits to an individual institution shorter but, to preserve efficiency, carefully planned so that an expert can visit several partners where feasible.	Minor	Although the government has expressed commitment and demonstrated this through DEPP II, sometimes immediate priorities may divert resources away from programme activities. The Vietnamese partners are aware of this and during formulation requested that expert visits be shorter and tightly focused. This has been done
Overlap of activities with other Development Partners in the sector and overloading of partners capacity	Unlikely	Insignificant	There is DP coordination at embassy level and coordination of international cooperation by partners at sector level.	Minor	Many development partners (DPs) are seeking to cooperate in the energy sector in Vietnam. Generally, there are more needs in the sector than can be provided by the DPs combined, but support needs to be coordinated and distributed strategically to get the most value. In Vietnam there has been ongoing detailed dialogue with the DPs as well as the programme partners, to avoid duplication or overloading.
Provincial level authorities do not give the appropriate priority to enforce energy efficiency	Likely	Significant	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	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. Provinces that take part in the programme will have expressed belief in the economic advantages of the programme and

regulations on their local industries			as a threat to growth. 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.		programme activities will demonstrate the truth of this proposition throughout the implementation period.
The case studies are not seen as directly relevant in other Provinces and are not widely replicated.	Likely	Significant	The risk is mitigated by developing implementation plans and guidelines rather than addressing specific problem areas. These will be applicable at least to some extent in most of Vietnam	Minor	The target provinces will be selected based upon their ability to provide a representative range of issues and problems that are relevant in many provinces in Vietnam.
Support to the regulatory framework and flexible options in the power system is ineffective because proper implementation of the competitive power market is delayed	Unlikely	Insignificant	Delay in power market implementation related to other aspects is only a minor risk as the capacity needs will be the same in a vertically-integrated power sector as in a power sector where ownership is unbundled and power companies compete on a power market.	Minor	The ownership structure in the power market and the degree of competition does affect the overall need for accurate forecast and auxiliary services. Moreover, other development partners have supported and have indicated willingness to further support other capacity development areas necessary to power market development
The ambitious targets for increasing the share of power provided by renewable	Unlikely	Significant	Implementation is designed to target the "low-hanging fruit" that is the areas that are most readily addressed to provide the largest benefit in terms of power supply and financial	Moderate	The support is valuable because it helps overcome the difficulties in integrating intermittent power production that can occur when Vietnam realizes the plans to construct new offshore wind and solar capacity. If the share of renewable energy remains at or

energy are not			benefits. The clear advantages		around the current level the outputs of the
met.			to increasing renewable power		engagement will be less relevant.
			share should then encourage		
			greater cooperation from a		
			wider range of providers.		
Restricted travel by DEA to Vietnam due to COVID 19, may compromise the level of engagement of all parties. Similarly, Covid-19 lock down may affect partner institutions and participating factories' operational and day-to-day engagement in the programme	Very likely	Significant	The risk is mitigated by increasing the number of national experts to perform the energy audits and capacity building. Direct engagement by the posted energy counsellor at the embassy as well as long term advisor at MOIT will also mitigate the risk.	Moderate	DEPP II and DEPP III have demonstrated a valuable ability to perform its activities virtually by connecting with partners online. However, the energy audits require physical presence at various industrial sites in Vietnam
Lack of available finance on the commercial marked to support energy efficiency investments at energy-intensive industries	Unlikely	Significant	The risk is mitigated by the energy audits that provide validated guidance on the most cost effective measures. The industry can use the findings from the energy audits in order to mobilize funding. The residual risk is considered as low.	Minor	Limited access to finance for investments in energy efficiency is a well-known barrier in Vietnam. Financial institutions do not consider energy efficiency as an attractive area of investment. However, DEPP and other development partner have over the years been successful in demonstrating the potential for financial returns of investments in energy efficiency, which have opened up the financial marked for these investments.

## **Institutional risks**

Risk Factor	Likelihood	Impact	Risk response	Residual Risk	Background to assessment
The programme could fail to deliver its outcomes, which will reflect negatively on DEA, MEUC, and the MFA.	Unlikely	Insignificant	The theory of change and results framework with SMART indicators to the extent possible will be designed with realistic and measurable targets. A stakeholder platform and effective communication strategy will ensure that results, achievements and any difficulties or drawbacks are communicated effectively to key audiences.	Minor	The programme is strategic and is of major importance to the partner institutions but there are many other actors whose actions have a bearing on the sector and the mitigation of CO <sub>2</sub> emissions. Complete failure is unlikely, and delays in meeting targets could not realistically be attributable to Danish cooperation. Even if it were, this would be unlikely to damage the reputation of the Danish partners.
There could be unrealistic expectations of opportunities for Danish private sector commercial interests related to the cooperation.	Unlikely	Insignificant	The partners are aware of the strengths of the Danish private sector and for the most part see this as one of the potential benefits of the programme. The private sector will be kept informed of the progress being made and will have an opportunity to comment and to advise on any adjustments that may help remove barriers to investment.	Minor	As Denmark has a strong resource base in renewable energy, energy efficiency and climate change mitigation, and all of the programme countries present attractive markets for renewable energy in the coming decades, there are expectations that the cooperation will give rise to commercial opportunities. This general issue is part of the Program concept and is generally welcomed by partners as an additional benefit of the cooperation.
Partners external to DEA could engage in fraud, corruption or human rights	Unlikely	Significant	The programme will follow DEA financial procedures and the risk of direct corruption is considered	Minor	Any corruption, violations of human rights or environmental damage related to programme activities could negatively affect the reputation of implementing and funding partners. In

violations under activities funded or facilitated by the programme. unlikely. Where pilot projects are included in program activities, 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.

Vietnam DEPP III centres around peer to peer skills transfer and institutional capacity development. These are unlikely to be susceptible to any such risk. Since the budget is in control of the DEA, mainly allocated for TA provision from Denmark and only limited funds available to be spent in country the impact of corruption on implementation will be insignificant. Human rights violations are unlikely given the nature of the programme activities, i.e. technical cooperation at local government and industrial installation level.

# Annex 5: Process action plan for new initiatives under DEPP III

# Process Action Plan for additional support under DEPP III

Step	Activity	Date
	Kick-off meeting for the formulation between MFA GDK and ELK, RDE in	
1	Jakarta, MCEU and DEA	13-aug
		Ultimo august -
2	Ongoing formulation and dialogue with partners	medio September
	Submission of document to the Danida Programme Committee and as	
3	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