NS-251 - Supporting Program for Wind Power Development in Viet Nam

Viet Nam

NAMA Seeking Support for Implementation

A Overview

A.1 Party	Viet Nam
A.2 Title of Mitigation Action	Supporting Program for Wind Power Development in Viet Nam
A.3 Description of mitigation action	The overall objective of this NAMA is to promote wind energy and to contribute to the reduction of GHG emissions in Viet Nam by removing barriers on policy, capacity and technology. The specific obectives are aiming to: * Enhance the collaboration and the engagement of relevant ministries to development wind power development; * Improve the support for investment progress of wind projects. The scope of the Program is national wide. Timeframe of the first phase is from 2016 to 2020, and the second phase is 10 years from 2021 - 2030.
A.4 Sector	[X] Energy supply [ ] Residential and Commercial buildings [ ] Agriculture [ ] Waste management [ ] Transport and its Infrastructure [ ] Industry [ ] Forestry [ ] Other
A.5 Technology	[ ] Bioenergy [X] Energy Efficiency [ ] Hydropower [X] Wind energy [ ] Carbon Capture and Storage [ ] Land fill gas collection [ ] Cleaner Fuels [ ] Geothermal energy [ ] Solar energy [ ] Ocean energy [ ] Low till / No till [ ] Other
A.6 Type of action	[ ] National/ Sectoral goal [ ] Strategy [X] National/Sectoral policy or program [ ] Project: Investment in machinery [ ] Project: Investment in infrastructure [ ] Project: Other [ ] Other
A.7 Greenhouse gases covered by the action	[X] CO2 [X] N2O [ ] PFCs [X] CH4 [ ] HFCs [ ] SF6

☐ Other	

B National Implementing Entity

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B.1.10	Address	
B.1.11	Phone	
B.1.12	Email	
B.1.13	Comments	

C Expected timeframe for the implementation of the mitigation action

C.1	Number of years for completion	15
C.2	Expected start year of implementation	2016

D Currency

D.1	Used Currency	AED Conversion to USD: 1

E Cost

E.1.1 Estimated full cost of implementation	34000000
E.1.2 Comments on full cost of implementation	The program consists of two phases. The total financial support for this NAMA would be approximate US$ 34 million. In particular, budget for phase 1 is estimated about 14 million, comprising 41.2%. Budget for phase 2 is estimated around US$ 20 million, accounting for 59.8%. Contribution from the government of Viet Nam is about US$ 0.3 million. Total budget will come from a various sources, such as International Public Financing (Bilateral or Multilateral), State budget, International Finance Inst., under a number of instrument like grants and domestic contribution.
E.2.1 Estimated incremental cost of implementation	
E.2.2 Comments on estimated incremental cost of implementation	

F Support required for the implementation the mitigation action

F.1.1 Amount of Financial support	34000000
F.1.2 Type of required Financial support	☒ Grant ☐ Loan (sovereign) ☐ Loan (Private) ☐ Concessional loan ☐ Guarantee ☐ Equity ☐ Carbon finance ☐ Other
F.1.3 Comments on Financial support	The total financial support for this NAMA would be approximate US$ 34 million. In particular, budget for phase1 is estimated about 14

	million, comprising 41.2%. Budget for phase 2 is estimated around US$ 20 million, accounting for 59.8%.
F.2.1 Amount of Technological support	
F.2.2 Comments on Technological support	
F.3.1 Amount of capacity building support	
F.3.2 Type of required capacity building support	☐ Individual level ☐ Institutional level ☐ Systemic level ☐ Other
F.3.3 Comments on Capacity Building support	
F.4 Financial support for implementation required	☐
F.5 Technological support for implementation required	☐
F.6 Capacity Building support for implementation required	☐

G Estimated emission reductions

G.1 Amount	66.6
G.2 Unit	MtCO2e
G.3 Additional imformation (e.g. if available, information on the methodological approach followed)	The LEAP model is an accounting system used to develop projections of energy balance tables based on final energy consumption and energy input/output in the transformation sector. Final energy demand forecasting was estimated for each sector such as industry, transport, agriculture, commercial and residential sectors. Final energy demand for the sectors (except residential sector) is forecasted using energy demand equations by energy and sector and future macroeconomic assumptions. In order to estimate energy demand and the substitution as well as the penetrative levels of renewable energy technologies, the residential energy demand was estimated by using the bottom-up method that energy demand was broken down in to sub-sector, end-uses and technologies. Estimation of the primary energy requirements made use of an accounting model on which the future choice for technology and fuels were based on the programs of the country and the most likely available supply in the future. Based on historical energy data and the above assumptions, final energy demand, input fuel-energy for power generation and then primary energy supply for Viet Nam in BAU were developed. GHG emissions in BAU also were considered and calculated for whole energy system. In addition to the GHG emission from fuel combustion, this study also looked at the fugitive emissions from the energy production activities such as coal mining and oil and natural gas production activities. All the GHG emission calculations were based on the IPCC factors that are available in LEAP model.

H Other indicators

H.1 Other indicators of implementation	Progress indicators will be used to measure the outputs and outcomes of progress of the NAMA implementation related to the activities for policy development, technical development and capacity building. The impact indicators could be quantitative or qualitative to measure the changes after NAMA implementation compared to baseline scenario or absence of wind NAMA.

I Other relevant information

I.1 Other relevant information including co-benefits for local sustainable development	Social impacts : • *Reduce costs associated with air pollution such as both healthcare and environmental costs;* • *Create a new opportunity for job and income improvement;* • *The local infrastructure such as road and service system support for the project is also enhanced, which contribute to improvements in the living conditions, jobs and income for local people.* Economic impacts: • *Create more jobs and enhancing quality of life in the communities where projects are located;* • *Pay significant property taxes and state taxes each year;* • *Reduce fossil fuels especially imported fuels that lead to reduce a dependence on international market and ensure energy security;* • *Reduce annual amount of energy import in almost years;* • *Reduce dependence on imported coal as well as the effects of price and supply volatility from outside.* Environmental impacts: • *Displace electricity generation from coal thermal power plants, as the operation of wind turbines does not directly emit GHGs or other air pollutants;* • *Contribute to climate change mitigation;* • *Prevent the total of emission of roughly 5.2 million tonnes of CO2 by 2020 and contribute further to reduction of 66.6 million tonnes of CO2 by 2030;* • *NAMA generate benefits not only via reductions in GHG emissions but also via reductions in local air pollution, which help drive improvements in local air pollution.*

J Relevant National Policies strategies, plans and programmes and/or other mitigation action

J.1 Relevant National Policies	• *Decision No. 158/QD-TTg dated 02 December 2008 by Prime Minister on approving the National Target Program to Respond to Climate Change.* • *Decision 1208/2011/QD-TTg dated 21 July 2011 by Prime Minister on approving national power development plan which set the goal of renewable energy sources for power*

generation with the share of renewable energy power increasing to 4.5% by 2020 and to 6.0% of the total power generation by 2030.

- *Decision No. 2139/QD-TTg dated 05 December 2011 by Prime Minister on approving the National Strategy on Climate Change.*
- *Decision 432/QD-TTg dated 12 April 2012 by Prime Minister on approving the Sustainable Development Strategy in Viet Nam for the period 2011-2020.*
- *Decision 1216/QD-TTg dated 05 September 2012 by Prime Minister on approving National Environment Protection Strategy to 2020 and orientation to promote clean technologies, cleaner production processes and less polluting, environment-friendly fuels and materials.*
- *Decision 1393/QD-TTg dated 25 September 2012 by Prime Minister on approving the National Green Growth Strategy.*
- *Decision No. 1474/QD-TTg dated 05 October 2012 by Prime Minister on approving the National Acyion Plan on Climate Change for the period of 2012-2020.*
- *Decision No. 1775/QD-TTg dated 21 November 2012 by Prime Minister on approving the Plan of Greenhouse Gases Management, Management of Carbon Trading Activities to the World Market.*

J.2 Link to other NAMAs

K Attachments

K	Attachments	**Title** **Description**
K.1	Attachment description	
K.2	File	Browse...

L Support received

L.1 Outside the Registry	Support for the development of this NAMA was provided by the Facilitating Implementation and Readiness for Mitigation Project funded by the Danish International Development Agency through UNEP-DTU Partnership.
L.2 Within the Registry	**Support provided** **SupportType** **Amount** **Comment** **Date**