

Vietnam Energy Partnership Group

Event: First meeting of TWG 1 on Renewable Energy

Date: 17 April 2018

Location: MOIT, room 101, 21 Ngo Quyen, Hanoi

Time: 8:30 – 11:30

Participants: see lists of participants and invitees in Annex 1.

Chair and Co-chair of TWG#1:

- Mr. Nguyen Ninh Hai - Chair of TWG1 on RE, EREA, MOIT
- Mr. Martin Hoppe - Co-chair of TWG1 on RE, First Counsellor of Economic Cooperation and Development, Germany Embassy

Meeting Objectives:

1. To exchange views on challenges for renewable energy development in Viet Nam
2. To agree the 2018 workplan of TWG 1

Meeting inputs:

Renewable energy project mapping; presentation on renewable energy in Viet Nam including proposed TWG 1 work plan (Annex 2).

Meeting minutes: Attached as Annex 3.

Conclusions of the meeting:

The TWG broadly agreed on the workplan themes and schedule as suggested by the co-chair (see attached), which was included in his presentation. Work on Direct Power Purchase Agreement (dPPA) will not be needed under TWG 1. Participants are also invited to look again at the workplan and share views with the Chair and co-Chair, in particular regarding inputs into the planned forthcoming two meetings. It was also concluded that:

1. The TWG, with the help of Secretariat will collect ideas and recommendations for the Steering Committee (SC) and High Level Meeting (HLM);
2. TWG 1 in the first year will focus on wind and solar power, aiming to provide input for the formulation of the new Power Development Plan (PDP) and the Renewable Energy Roadmap;
3. The next meetings must address topics in a concrete manner, about sustainable mechanisms, technical matters, so we can have a detailed and focused discussion on the proposed themes;
4. It is hoped that the business sector would be clearer of what to expect from the TWG and would be more likely to attend and contribute. The Chair and co-Chair, through the Secretariat, aim to reach out to the business sector with more vigor.

Action points:

Action	Responsibility
1. Approve report of the meeting	Chair & Co-Chair
2. Send report of the meeting to all TWG1 members (invited plus those who attended)	Secretariat
3. TWG Members to complement information on the DP survey of relevant projects	Secretariat, Members
4. Update list of (core and non-core) Members	Secretariat with direction from Chair & Co-Chair
5. Consult with Members on their leadership and/or "in-kind" human resources and specific actions towards a priority theme, and products/outputs and actions that should be linked to TWG1 (e.g. workshops, seminars that are specific enough to be able to interest private business in participation); and consolidate workplan 2018	Secretariat with direction from Chair & Co-Chair
6. Identify inputs into forthcoming TWG1 meetings, within the proposed and agreed themes / focus of these meetings	Chair & Co-Chair with key members and Secretariat
7. Submit work focus and work plan 2018 to the Steering Committee of the VEPG	Chair & Co-Chair with Secretariat
8. Invite Members to express interest in access to the TWG1 E-library, and to share references through the E-library	Secretariat

Annex I: TWG#1 - Renewable Energy' members

Organization (English)	Name
MOIT	
New and Renewable Energy Division/EREA	Nguyễn Ninh Hải
New and Renewable Energy Division/EREA	Phạm Hương Giang
MPI	
Science, Education, Resources and Environment Dept. / MPI	Phạm Hoàng Mai
Science, Education, Resources and Environment Dept. Responsible for National Green Growth Program / MPI	Nguyễn Thị Minh Hiền
Industry Economic Dept./MPI	Trần Văn Ngọt
MOF	
Department of Debt Management and External Finance	Nguyễn Xuân Thảo
MOC	
Department of Science, Technology and Environment, Ministry of Construction	Nguyen Cong Thinh
International Cooperation Department, Ministry of Construction	Nguyen Thi Bich Hue
MOT	
Department of Environment, Ministry of Transport	Vu Hai Luu
Department of Environment, Ministry of Transport	Nguyễn Hữu Tiến
MONRE	
International Cooperation Department, MONRE	Ngo Tuan Dzung
Department of Meteorology, Hydrology and Climate change, MONRE	Nguyễn Văn Tuệ
MARD	
Science, Technology and Environment Department, MARD	Le Van Bam
SBV	
Deputy Director General of Credit Department, State Bank of Vietnam	Trần Văn Tân
EVN	
EVN	Nguyen Cuong Lam
NGOs	
Green Innovation and Development Centre (GreenID)	Nguy Thi Khanh
	Đỗ Minh Tâm
	Nguyen Hai Long
Live & Learn	Do Van Nguyet
SNV	Bastiaan Teune
Vietnam Clean Energy Association (VCEA)	Mai Duy Thiện
Vietnam Clean Energy Association (VCEA)	Hoà Nguyễn Xuân
Sustainable Energy Program, WWF	Pham Cam Nhung
Unis & Ins	
Clean Energy and Sustainable Development (CleanED) lab / USTH	Duong Ha Minh

Organization (English)	Name
CleanED & VSEA	Dr Nguyen Hoang Anh
Electric Power University	Truong Huy Hoang
Hanoi University of Technology	Pham Hoang Luong
Institute of Energy	Hoang Tien Dung
Water Resource University	Lê Công Thành
Water Resource University	Nguyễn Cảnh Thái
Development Partners	
BELGIUM	Mr. Ivo Hooghe
DENMARK	Christian Brix Møller
FINLAND	Mr. Marko Saarinen
	Asko Ojaniemi
GERMANY	Mr Martin Hoppe
HUNGARY	Márton Károlyi
IRELAND	Nuala O'Brien
ITALY	Natalia Sanginiti
	Mr Martino Melli
Netherlands	Ms Pauline Eizema
	Ms. Pham Minh Uyen
ROMANIA	Mr. Valeriu ARTENI
	Ms. Luiza Girleanu
SPAIN	Vincente Selles
	Mr. Miguel Moro Aguilar
EU DEL	Cecile LEROY
	TRAN THUY Duong
Canada	Kate Reekie
	Nicolas Drouin
Australia	Justin Baguley
New Zealand	Mr Tom Wilson
	Ms Pham Thi Ngan Hoa
AFD, French Development Agency	Mr Fabio Grazi
	Ms NGUYEN Thi Thanh An
	Mr. Fabrice RICHY
United Nations Development Programme, UNDP	Đào Xuân Lai

Organization (English)	Name
	Jay Malette
UNIDO	Ms. Le Thanh Thao
	Ms Pham Thi Nga
Food and Agriculture Organization, FAO	Mr JongHa Bae
Global Green Growth Institute, GGGI	Mr Adam Ward
	Hanh Le
	Nguyet Pham
Norway	Mrs. Siren Gjerme Eriksen
Norway	Tone Slenes
Switzerland	Marcel Raymond
Switzerland	David Best
SECO	Do Quang Huy
German International Cooperation, GIZ	Mr. Ingmar Stelter
	Mr. Tobias Cossen
German Development Bank, KfW	Nguyen Bich Ngoc
ADB	Hyunjung Lee
	Choon-Sik Jung
World Bank	Franz Gerner
South Korea	Yoon Mee Lee
JICA	Murashima, Eiichi
	Mr. Tetsuo KONAKA
USAID	Christopher Abrams
UK Embassy Hanoi	Le Thi Ngoc Bich
DPs' confirmed - Observer RE TWG	
Norway	Mrs. Siren Gjerme Eriksen
Switzerland	Tone Slenes
United Nations, UN	Mr. Kamal Malhotra
German International Cooperation, GIZ	Mr. Ingmar Stelter
German Development Bank, KfW	Mr Christian Haas

Annex 2 Presentation on renewable energy in Viet Nam including proposed TWG 1 work plan



Renewable Energy in Vietnam

Technical Working Group on Renewable Energy

April 2018

Martin Hoppe,

Head of Cooperation, German Embassy

Co-Chair of Technical Working Group



Contents



1. Introduction
2. Setting the scene: Renewable energy in Vietnam – opportunities and challenges
3. Proposed priority areas for discussion in TWG
4. Proposed work plan and schedule of meetings

1. Introduction

- Climate change concerns all countries and developing partners
- NDC commits all partners to climate change mitigation and an increasing level of ambition with respect to new mitigation targets
- Electricity sector with high growth rates of demand holds large potential for emissions savings and Vietnam is at a critical stage of the development of its energy sector
- The TWG on RE is not any more about why renewable energy is important, but how to make it work for the benefit of Vietnamese people
- Objective: Exchange and consolidate views brought by different stakeholders and experts (not replace ongoing activities) on selected priority topics



2. Setting the scene: International trend in renewable energy and targets in Vietnam

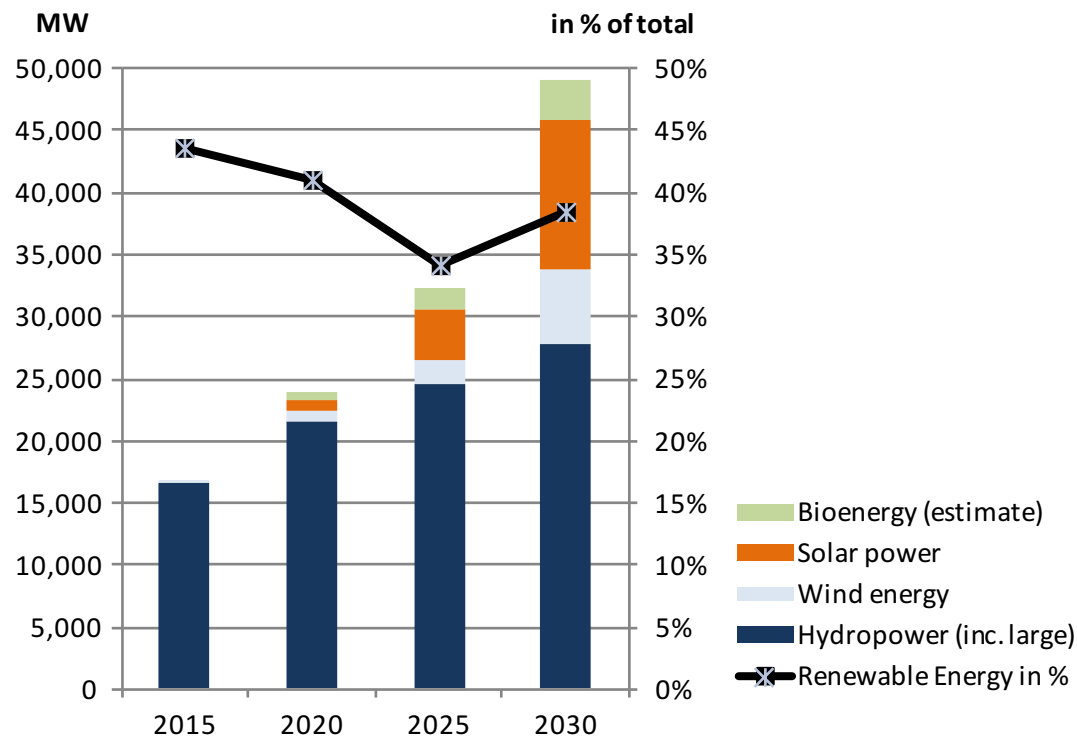


Political targets

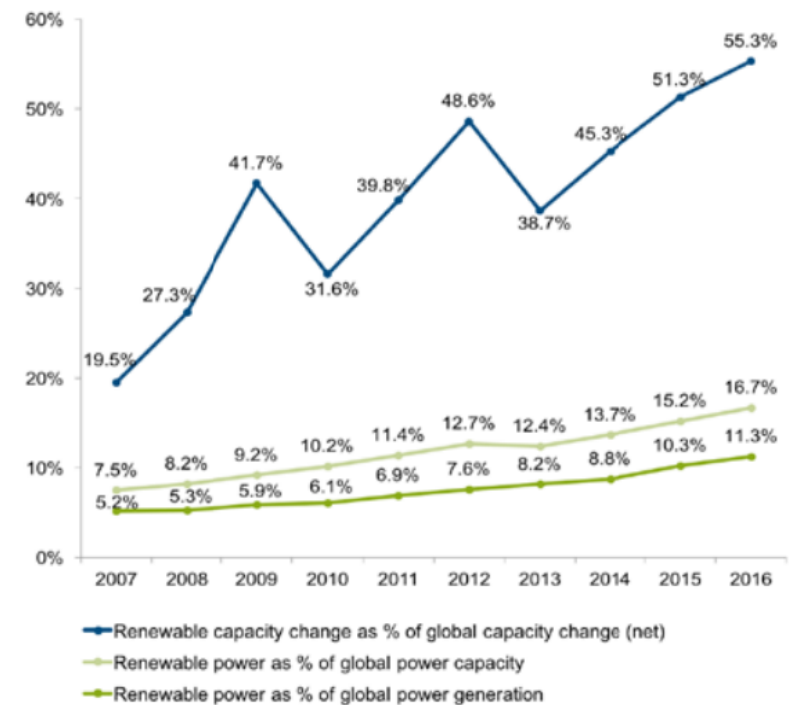
- Vietnam has high targets for renewable energy (PDP VII rev.)
- However as a share of total capacity, RE incl. HPP will decrease until 2025

- Internationally, the share of renewable energy capacity has more than doubled in the last 10 years

Vietnam Renewable Energy Targets (MW)



Renewable energy as share of global capacity



Renewables figure excludes large hydro. Capacity and generation based on Bloomberg New Energy Finance totals

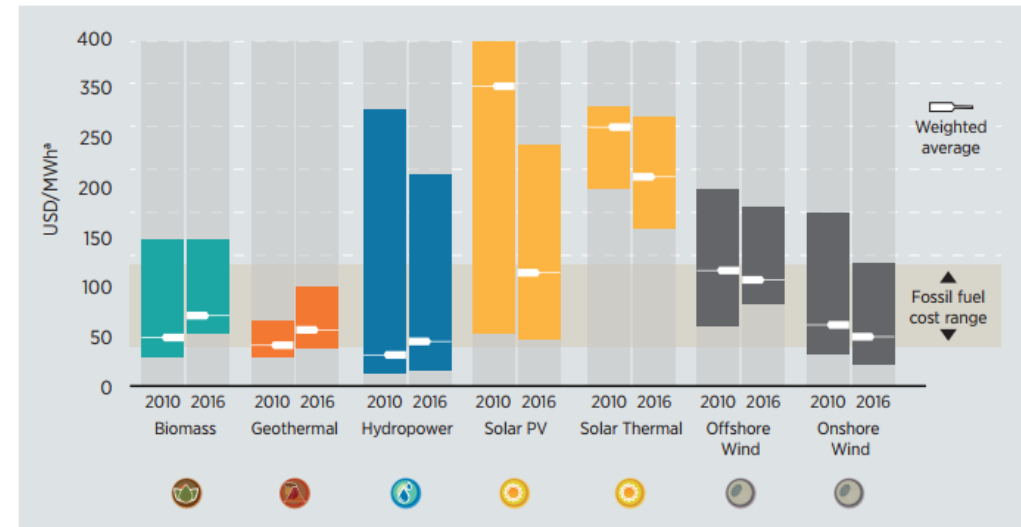
2. Setting the scene: The case for renewable energy in Vietnam



International price trends favour renewable energies

- Last years have seen dramatic decreases of average (levelized) costs of renewable energy internationally, in particular for wind and solar energy.
- However: there is a wide variation of costs depending on the specific conditions of each country

Figure 1.1 Levelised cost of electricity for utility-scale power (ranges and averages), 2010 and 2016



Note: a) MWh: megawatt-hour. b) All costs are in 2016 USD. Weighted Average Cost of Capital is 7.5% for OECD and China and 10% for Rest of World.
Source: IRENA, 2017a

Good technical potential for renewable energy

- Vietnam has good theoretical potential for renewable energy, in particular for solar energy and wind energy (proposed focus of the TWG work in this year)

Strong donor support

- Despite the general trend of decreasing ODA in Vietnam, there is high donor support for climate change mitigation activities, in particular renewable energy
- However: Challenge to ensure coherence and effectiveness

2. Setting the scene: Challenges remain (and have been analyzed before)



Regulation and incentives

- GoV has adopted a number of important policies for all relevant renewable energy technologies
- Policies have been successful to develop a commercial small hydropower sector
- However: Actual investment in renewable energy other than small hydropower has been slow
- High risk perception in particular by private sector actors

Finance

- Renewable energy investments require high level of financing because of high up-front investment costs compared to conventional power plants
- Domestic financing resources limited
- International financing restricted by high risk perception
- Public borrowing capacity including for ODA and concessional loans is limited (statutory debt ceiling)

Awareness and capacity

- Need for awareness of the full cost and benefit of renewable vs thermal energy in the long run
- Limited experience with integrating large amounts of variable renewable energy in the grid while ensuring security of supply
- Limited experience in the market with respect to non-hydro renewable energy

3. Priority themes:

Track 1 - Assessing the potential and integrating RE



1. Costs and benefits of renewable energy generation

- Assessing the full costs and benefits of renewable power generation compared to thermal power generation in the long term
- Results of this analysis can provide input to the new Power Development Plan or inform the INDC process

2. Integrating and planning renewable energy in the transmission system

- Identification of (expected) priority areas for RE investment
- How can GoV ensure that RE generation can be effectively integrated without jeopardizing the stability of the system
- What major investments in the transmission network are needed?
- The challenge of matching grid capacity and renewable investments

3. Integrating renewable energy into the environment

- Scarcity of land is a challenge – what are feasible land-use combinations between solar / wind energy and agriculture or other commercial land uses?

3. Priority themes:

Track 2 – Support mechanisms for solar and wind power



1. Review of current FiT regime

- Drawing lessons learnt from wind power FiT
- Need for transitional mechanism from current FiT to auctions (after June 2019)
- What other regulatory changes may be required (eg. PPA)
- Review of first experience with rooftop PV installations

2. Beyond FiTs: competitive procurement of renewable energy generation

- There is an international consensus that well designed auctions can lead to more competitive prices
- Discuss basic design features for auctions
- Roadmap for implementing (pilot) auctions

3. Beyond FiTs: renewable energy generation and the power market

- The case for direct power purchase agreements to leverage private investments
- Ensuring compatibility of the new renewable investments with the future competitive wholesale market

4. Technical standards and grid codes

- Discuss need for updated standards and grid codes for wind and solar installations

5. Proposed work plan and meeting schedule



1st TWG meeting

17.04.2018

- Discuss and agree on priority topics
- Overview of current DP support
- Agreement on work plan

2nd TWG meeting

Tentative date: 31 August 2018

Proposed topics:

- ~~Direct PPAs~~
- Review of wind and solar FiT regime
- Transitional mechanism
- Basic design features of competitive procurement



2nd High level meeting

Tentative date: October 2018

3rd TWG meeting

▪ Tentative date: tbd

Proposed topics:

- Roadmap to auctions
- Review of wind and solar FiT regime
- Cost and benefit of RE
- Integrating RE in transmission network planning



3rd High level meeting

Tentative date: tbd



Thank you for your attention!

Annex 3 Meeting Minutes (summary)

Event: First meeting of TWG 1 on Renewable Energy
Date: 17 April 2018
Location: MOIT, room 101, 21 Ngo Quyen, Hanoi
Time: 8:30 – 11:30

Agenda item	Summary
Opening remarks	<ul style="list-style-type: none"> • The Chair, co-Chair and participants introduced themselves • Chair and Co-Chair welcomed participants and indicated their priorities
TOR of TWGs	<p><u>The Secretariat</u> shared the updated generic TOR of TWGs</p> <p><u>Participants</u> raised that</p> <ul style="list-style-type: none"> • The difference between core-members and non-members of VEPG should be clarified, and the participation of businesses and other ministries should be encouraged. The private sector may be interested in topical events. <p><u>The Secretariat</u> clarified that</p> <ul style="list-style-type: none"> • DPs are core members and representatives from business, NGOs and research / academia are also invited to TWGs as non-core members.
Renewable energy project mapping	<p>The Secretariat presented the output of project mapping survey and some analysis of TA and investment support to develop RE in Viet Nam.</p> <p><u>TWG Members</u> raised that</p> <ul style="list-style-type: none"> • There is some confusion on the data, which requires clarification and updates, and would like it to be shared to be able to provide comments
Proposed focus themes and workplan 2018, including what Members “can bring to the table”	<p>The co-Chair presented challenges and opportunities of RE in Viet Nam and proposed priority areas for discussion in the TWG, themes and the draft work plan including a proposed schedule of TWG#1 meetings. [<i>see PP presentation by co-Chair in a separate file</i>]:</p> <p><u>TWG Members</u> commented that</p> <ul style="list-style-type: none"> • There is a need for a roadmap on increased renewable energy (RE), reduced coal use, and an increase of energy efficiency (EE). • There is a need to address specific issues, such as the solar Power Purchase Agreement, RE financing, private sector investment in RE, which requires a dialogue, especially with the private sector. • Some DPs are supporting Master planning but this does not just fall under TWG1 so there is a need for TWG coordination. • The difference between the TWG and activities of DPs should be clarified. • Other than solar PV and wind power issues are also important, e.g. bio-energy and waste-to-energy; boilers for drying; biochar in agriculture; the small players/ scale RE; electric transport; creation of RE service centres to improve access to finance and technical services. • We must address externalities of fossil fuels such as health costs that RE does not have. • Some DPs/others are working on related studies though they may not all be delivered on time for TWG1 sessions, including e.g. on options for procurement in RE and other technologies. Other studies are needed, such

	<p>as on systems planning, grid integration and learning lessons from e.g. small hydro regulations, but if those are happening not everybody knows about them.</p> <ul style="list-style-type: none"> • Several DPs will organise events that are relevant for TWG 1, including a special seminar with scientists, consultations with businesses on RE. The TWG 1 must provide updates and get feedback from partners. • The MOIT (annual) workplan on RE is important and TWG 1 should note. <p><u>The Chair and co-Chair explained that</u></p> <ul style="list-style-type: none"> • The RE Roadmap to implement the Renewable Energy development Strategy (REDS) is also receiving DP support and is expected to be submitted at the end of 2018 • The TWG will not duplicate what specific DPs already do. • Private sector representatives had been invited. We must continue the effort to get the private sector around the table and invite key people. • Financing aspects are planned in the proposed second block of issues and a roadmap towards RE auctions is also important. • Viet Nam has a small portion solar and wind and in the short term the effect on transmission lines and grid stability will be limited, while in certain areas with a lot of RE some measures are more urgent. • We are aware of the importance and potential of biomass, but we need a focus for TWG1 for this year, so we propose solar and wind for now • Awareness raising is also key challenge • Direct Power Purchase Agreement (PPA) is already being addressed, so we remove it from the TWG 1 plan. <p><u>The Secretariat explained that</u></p> <ul style="list-style-type: none"> • The Steering Committee will advise the Chairs and co-Chairs of TWGs on good coordination and exchanges between TWGs. • DP (project) events can use the TWG1 membership list of the Secretariat, to make sure that members are invited to consultations etc.
<p>Conclusions, agreements, closing remarks</p>	<ul style="list-style-type: none"> • TWG1 must provide input into the new PDP and the Renewable Energy Roadmap • We want sustainable mechanisms, technical matters to be addressed in TWG1, to promote RE, meet energy demand. • Direct PPAs are removed from the workplan, otherwise the workplan is approved. Presentation and workplan are shared.