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Rooftop Solar in Vietnam – A market in transition

CEIA Vietnam Webinar

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WORLD RESOURCES INSTITUTE

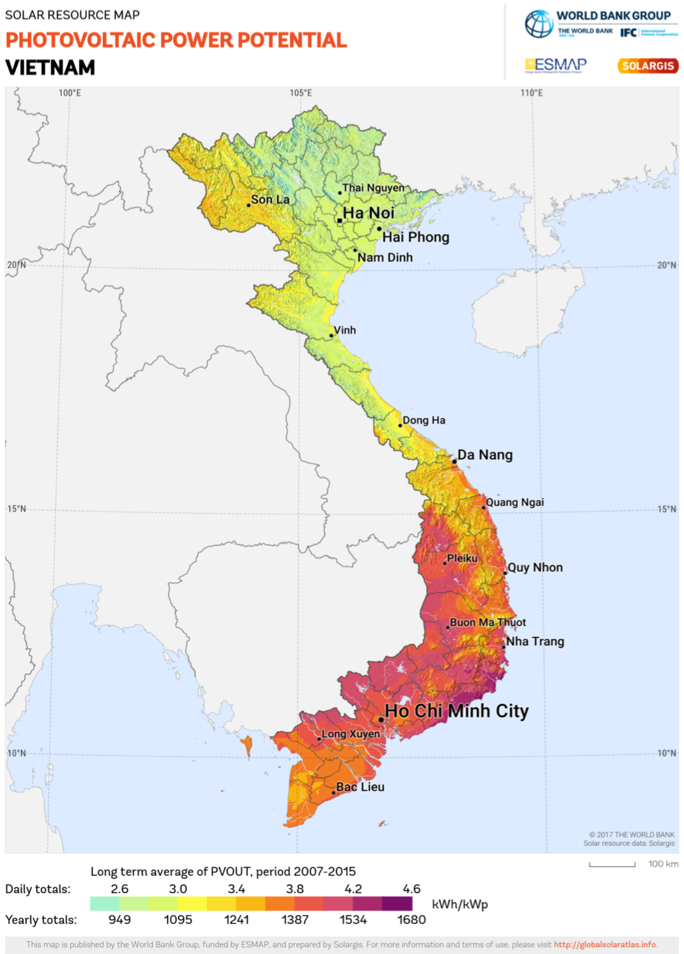
NREL NATIONAL RENEWABLE ENERGY LABORATORY

Outlines

- Solar PV market potential of Vietnam
- The market status
- A market in transition
- Take-aways

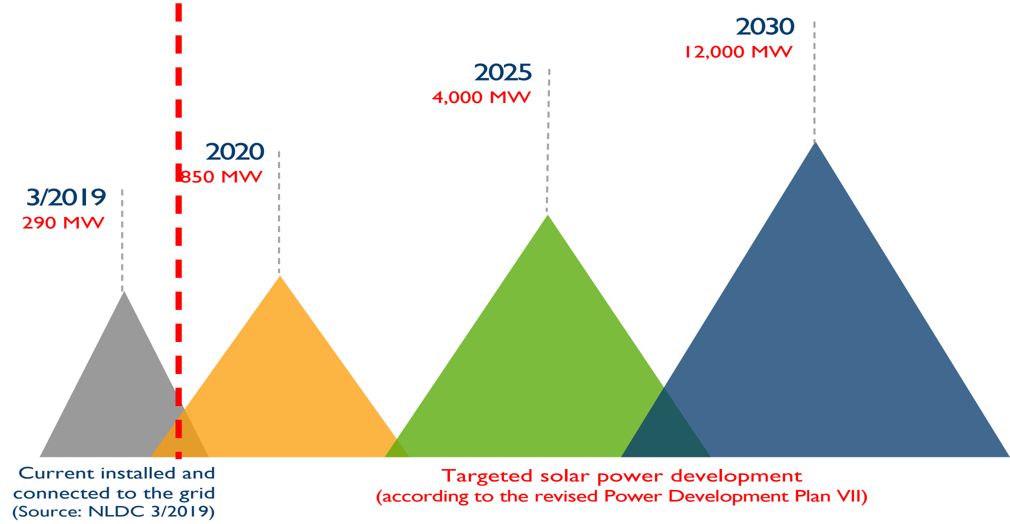
The solar PV market potential

Natural resources: 3.2 – 4.6 kWh/kWp/day



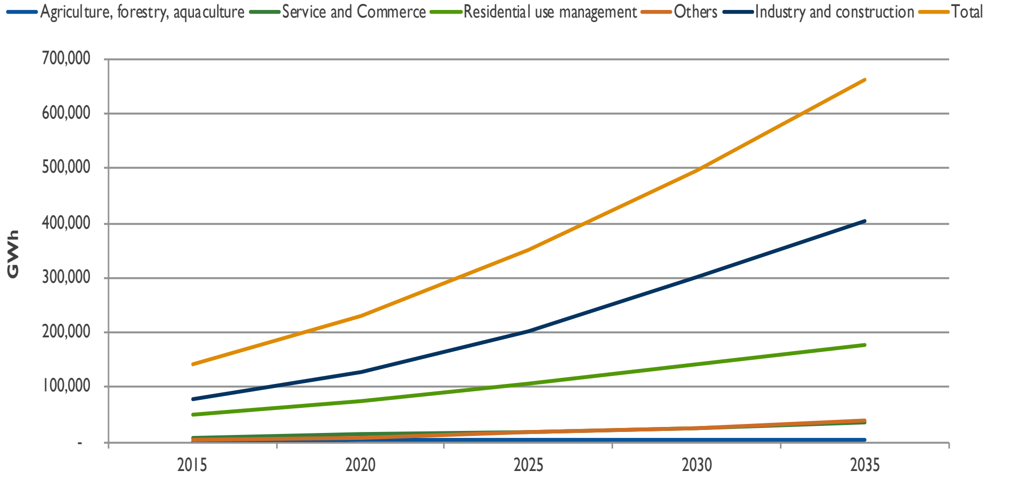
- **Political targets:**

  (solar rooftop + farms included)



- **Demand to meet:**

  Electricity consumption growth forecasted in the revised Power Development Plan VII



The RTS market status

	From 2017 – end 2018	Beginning 2019 – 6/2019	After 2019 (anticipated)
Support mechanism	Net-metering, effective for COD before 30 June 2019	Net billing, effective for COD before 30 June 2019	4 models, effective from 1 July 2019
FIT levels	9.35 Usct/kWh	9.35 Usct/kWh	Zonal FITs (4 zones)
Capacity limits	1 MW	1 MW	1 MW
Installed capacity	17.5 MW	> 30 MW - 50 MW	N/a
Number of consumers	1,510	1,800	
Main market segment	Households	C & I	N/a
Third party financing	No	No	Possible
Business model	Leasing, CAPEX	Leasing, CAPEX	Leasing, CAPEX, onsite direct wire
Payment	Stucked due to tax issues	2 separated flows and taxed	2 separated flows and taxed

A market in transition - Policy

Decision 11/2017/QD-TTg
Support mechanism for solar power
4/2017

Circular 16/2017/TT-BTC
Regulation on solar project development
9/2017

Decision 02/2019/QD-TTg
Amending and supplementing some articles on RTS of Decision 11/2017/QD-TTg
1/2019

1st Draft Decision
On support mechanism after Decision 11/2017/QD-TTg
1/2019

2nd Draft Decision
On support mechanism after Decision 11/2017/QD-TTg
2/2019

Circular 05/2019/TT-BCT
Amending Circular 16/2017/TT-BTC and SPPA for RTS projects
3/2019

Doc 1532/EVN-KD
Implementation guidelines of EVN for RTS projects
3/2019

???
6/2019

1.5 years

6 months

A market in transition – Overcoming barriers

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Legal and Regulatory

1. Limited communication and dissemination on solar power development
2. EVN and power units cannot sign the PPA with consumer due to the lack of official guidelines on electricity settlement
3. EVN is the sole buyer
4. Permitting and licensing requirement for over 1MW RTS projects

Financial incentives

1. Lack of rooftop solutions, investment model to promote rooftop solar power market
2. Lack of regulations for investors (third party) to invest in, construct rooftop solar power facilities
3. Cost of solar power facility is high and does not encourage consumers in investment

Technical

1. Lack of national technical standards on solar power equipment and facilities
2. Lack of regulation on construction licensing, roof structure load for rooftop installations
3. Lack of information on product quality, installation agency, operational mode, equipment warranty

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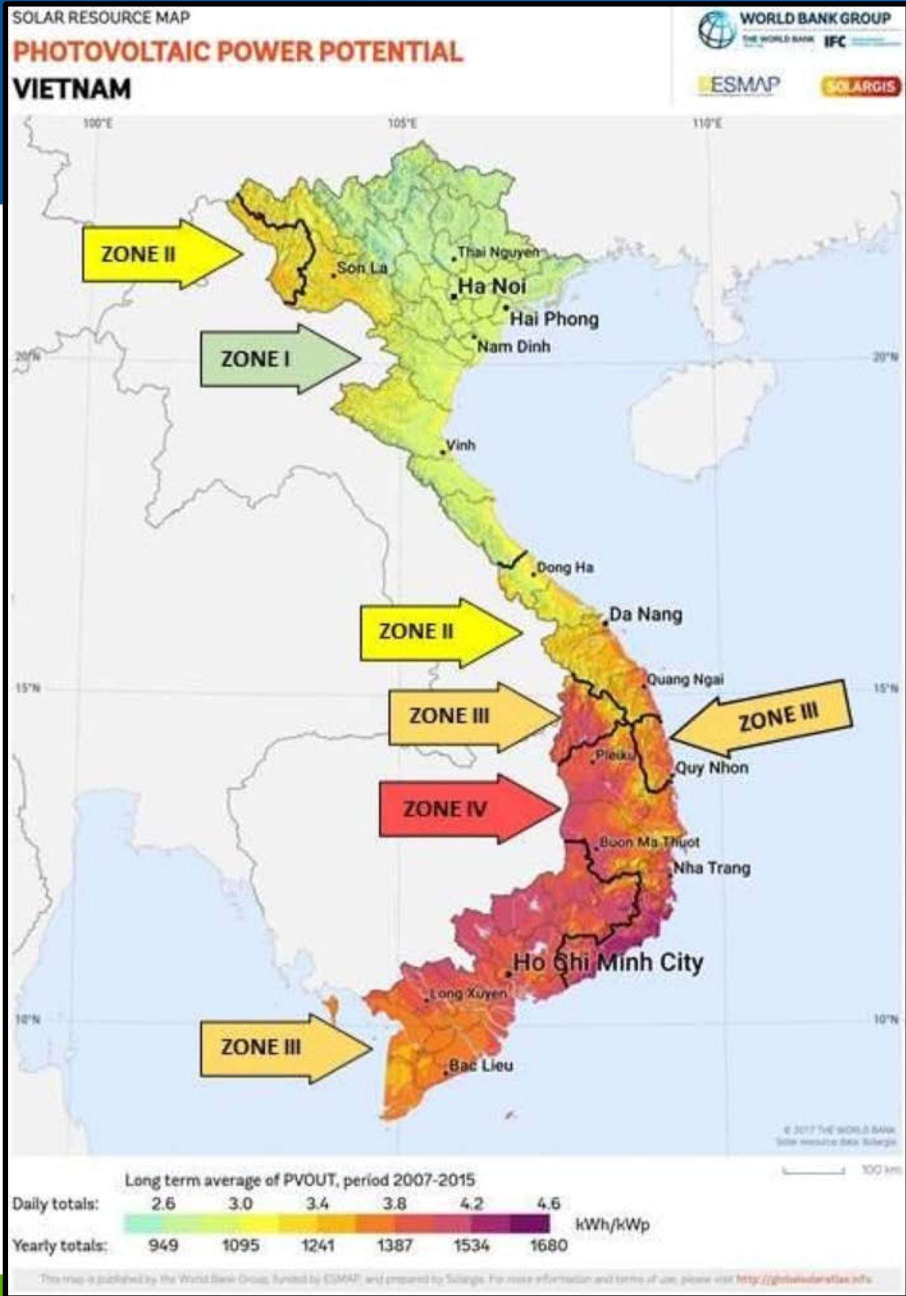
A market in transition - Policy

Anticipated FIT Levels for RTS				
(in U.S. Dollar Cents)	Zone I	Zone II	Zone III	Zone IV
Starting July 2019	¢ 10.87/kWh	¢ 9.36/kWh	¢8.38/kWh	¢ 7.89/kWh

- Payment levels highest for lower quality solar resource regions
- meant to drive deployment in those areas where solar is less competitive
- More RTS business models, open for activeness of various stakeholders
- Monthly payment is possible



To expect...

RTS for C&I buyers

Direct PPA without EVN grid usage (Industrial zones)

More RTS investment up-North

Dinsen Long An Project

Source: Blue Oak Energy

Take-aways

- RTS market in Vietnam is potential and the focus of GVN and EVN to satisfy huge demand with limited grid capacity
- Barriers are similar to new emerging markets
- Intensive efforts are happening to overcome market barriers
- July 1st 2019 is a big milestone witnessing market transition
- RTS projects are moving towards more economic incentives and business model options

CONTACT US

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