

POSITION PAPER OF POWER & ENERGY WORKING GROUP

*Prepared by
Power & Energy WG*

1. Investment, Energy Security and the 4th Industrial Revolution

The Made in Vietnam Energy Plan* laid out the roadmap of reforms that is to be implemented to attract an estimated US\$7billion of investment in energy annually from private investors.

The Plan highlights the speed, low risk and economic efficiency of fully utilizing the renewable energy resources, natural gas and energy efficient technology in Vietnam to meet the challenge of relentless growth in energy demand and how that plan would increase the probability of having energy security in southern Vietnam from 2018 to 2030.

Energy and power companies are increasingly using new technology to increase productivity, drive investments decisions and enhance safety.

International companies and Vietnamese SME are mainly manufacturing renewable energy equipment for export to other countries. If Vietnam policy makes renewable energy investments bankable in Vietnam, we would see major growth of Vietnamese SME's and Vietnamese jobs towards the 4th Industrial Revolution.

Global trends in energy markets reflect new efficiency demands from power consumers of reducing costs for clean energy and the impact of new technology within the 4th Industrial Revolution, including:

- a. Consumers expect to have access to clean energy. The RE100 Group and Apple, Nike, IKEA leading this dynamic movement and are looking to manufacture with a green footprint.
- b. The falling Cost of Solar and Wind technology bringing it to close to parity with the cost of energy produced from natural gas and super critical coal – if pricing is done fairly.
- c. A new architecture for the power market with the 4th Industrial Revolution technologies. A number of businesses is no longer is a power consumer playing a single role in the market – buying power, but also a power producer as the complimentary role of supplier – selling power. A number of businesses are looking at purchasing electricity from independent generators, as well as investing themselves in generation assets. The consumer is now also a power producer (solar rooftop) and as a power storage facility (batteries, the internet of things, electric vehicle charging/production of energy).
- d. Increasing sensitivity to air and water pollution and analysis of the social and economic costs, Vietnam can become an unfortunate example of the consequences of economic growth without sufficient environmental management.

The PDP8 will need to prepare for 4th Industrial Revolution to deliver a range of new technologies and inter-connectivity for data, power and services impacting all economies and industries. With a more flexible power development plan, the Government will avoid building a new dependence on the

imported fuel of coal with its consequent risks for security of supply and tens of billions of dollars in foreign exchange demands and balance of payment risk.

Key to success is the accurate pricing of power generation. Currently, solar and wind PPAs' contractual risks allocations created major bankability concerns from international and foreign financiers and private investors so tariffs are higher, coal is subsidized by government, offshore gas is heavily taxed, and power sale tariffs are below cost leading to enormous waste. Key to Power Development Plan #8 will be ensuring government priorities are properly reflected in the economic models to ensure desired outcomes.

The Made in Vietnam Energy Plan will achieve a more efficient use of electricity that will reduce energy waste and make Vietnam more competitive, productive and attractive for FDI.

Furthermore, it will decrease the heavy financial, logistical and severe environmental costs of transporting coal and coal waste, which helps to ensure energy security for a sustainable growth of Vietnam.

**The Vietnam Business Forum – Power and Energy Working Group, supported by EuroCham, EVBN, AmCham, and the Nordic Chamber of Commerce - December 2016, will be updated in January 2019.*

2. Three-keys reforms to accelerate investment in the power and energy sector:

- a. **VBF Power and Energy participation in the formulation of Power Development Plan 8:** A private sector contribution to the design and implementation of the new power development plan is essential, right from the policy preparation and development stage.

VBF P&E offers Strategic Planning - support to the Government of Vietnam in implementing their strategy of private sector involvement in the power and energy sector.

To engage with the Government of Vietnam in the process of developing a Power Development Plan #8 beginning in Quarter 4 of 2018 and continuing to 2020.

Specific Contributions:

Market Assessment (Vietnam, SouthEast Asia comparative data),

Commercial Finance Map (what is available to do what, at what price and under what conditions),

Legal and policy support, what are the best practices in ASEAN and the world showing results,

Retail Energy Pricing Assessment (measuring consumer price sensitivity, electricity needs and concerns),

Climate Finance Resources Map (what concessional funds are available to promote the private sector engagement in sustainable energy),

Consensus Promotion by leveraging VBF's existing relationships in MOIT (ERAV, EREA), MPI (the office of the National Designated Authority (NDA) for Green Growth), MONRE, MOF, MOC, The Central Economics Committee of the Communist Party and the National Assembly.

- b. **Direct Power Purchase Agreement:** MOIT approves a number of new renewable energy power projects that are permitted to execute a Direct Power Purchase Agreement with any large power

buyer that wants access to clean energy and wants to avoid an energy supply that increasingly relies on fossil fuels.

c. **Publish a Roadmap to Retail Power Price Inflation (Market Based Pricing):** MOIT publishes a Roadmap of Retail Power Pricing to 2020 with a vision to 2025, including definition of variable pricing between the three main tariff groups – residential, commercial and industrial.

- This provision of pricing information to power consumers is the most effective way to incentivize investment in energy efficient equipment and processes. Many large power consumers believe that power prices will remain low and subsidized (e.g. many cement plants have no Waste Heat Recovery systems in Vietnam, which is a standard feature in other countries).
- All available research in Vietnam indicates that it is not realistic to expect that power inflation will continue to be below or at the general inflation level and power inflation is inevitable and potentially steep.

3. Summary of specific issues: Please see the following table of comments.

No.	Issues proposed at Annual VBF 2017 and Midterm VBF 2018	Current status (Solved or Unsolved)	Issues proposed at Annual VBF 2018
1.	<p>Create a fairer allocation of risks between private sector investors and the state counter-parties/partners to:</p> <ol style="list-style-type: none"> 1. Attract US\$2 Billion of Investment by 2021 on a internationally bankable solar and wind PPA 2. Reduce the FIT cost of buying solar electricity by 20% <p>*Bring the model Power Purchase Agreement for solar energy (and Wind energy) up to international standard or improve the terms of the PPA.</p> <p><i>(1) Note that risk allocation issue is also directly applicable to PPP projects.</i></p>	<p><i>Unsolved</i></p> <ul style="list-style-type: none"> - Key recommendations in the VBF Mid-term 2017's consultation paper on the model solar PPA were not implemented in the final PPA version that was issued under Circular No. 16/2017/TT-BCT in September 2017. - Model wind PPA under draft new Circular recently released in November 2018 for replacing Circular No. 32/2012/TT-BCT: Improvements on key terms and bankability issues have not been addressed. 	<p>VBF welcomes and would like to participate in the analysis and recommendations for Power Master Plan 8 (PMP8).</p> <p>One key issue for PMP8 is MOIT's consideration on improvements for the solar and wind power market and improvements for the key terms of the model solar PPA that might apply from 1st July 2019 and model wind PPA.</p> <p>Risks in a PPA should be fairly allocated. PPA as the most important contractual arrangement in a power project should also be well drafted, with minimal uncertainty as to the meaning of provisions or scope for disputes in relation to interpretation of the contract. Contractual certainty is of paramount importance to international investors and financiers.</p> <p><i>Note: If the PPA is improved to meet the standard acceptable to international and domestic banks, the financing costs of solar power plants can immediately reduce and the Feed in Tariff can attract US\$2billion of FDI in solar energy by 2021.</i></p>

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			<p>VBF recommends that:</p> <ol style="list-style-type: none"> 1. MOIT makes the three most important improvements and amendments to the model solar and wind PPA(including: (i) Termination payments, (ii) Curtailment risks and Failure to take and pay by EVN, (iii) Dispute Resolution / Arbitration Clauses) and extends the application of the Feed-in-Tariff for 20 years from the commercial operation date under the PPA for new solar projects which reach their commercial operation date by 30th June 2021 with a revised Feed in Tariff. 2. It would be logical to also make similar improvements and amendments to the model PPAs for wind power, biomass and waste to energy. 3. The solar Phase 1 development in 2017-2018 may achieve initial success, but local bank finance resources are now fully utilised. Recommend policies that support and local banks to cooperate with international banks/ international investors to co-invest to with local

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			developer with bankable solar projects.
2.	<p>Stimulate Energy Efficiency Investment and Distributed (I) Electricity Generation by Power Consumers</p> <p>The Made in Vietnam Energy Plan noted that 11% of the total new power generation planned to be built by 2030 would not be needed if energy efficiency investment was stimulated.</p> <p>*Publish A Roadmap to Retail Power Tariffs linked to market-based pricing</p> <p>(1) “Distributed” Electricity Generation includes Rooftop Solar Energy, Biomass and Waste to Energy produced by consumers close to the point of consumption</p>	<p><i>Unsolved</i></p> <p>The low cost of electricity and confusing tariff structures encourages waste and deters investment in energy efficiency and many consumers believe that their electricity tariffs will remain heavily subsidised by the public budget.</p> <p>Decision No. 34/2017/QD-TTg issued on 25 July 2017 on the framework on average retail electricity pricing in the period of 2016 - 2010 and the "pricing framework" that was published in December 2017 is not clearly linked to a market-based pricing system for electricity and suggests that electricity prices will increase at a rate less than current CPI. This price signal will deter investment in energy efficiency, not stimulate it.</p> <p>The current tariff structures do not recover the cost of making and delivering electricity to consumers and may require an increasing amount of public subsidy due to the unavoidable increase in the cost of making and delivering new electricity from 2018 to 2020.</p> <p>(Reference US AID Power Pricing Study 2017, World Bank Report EVN A Financial Recovery Plan 2016)</p>	<p>Also under PMP8, that GVN create a market-based electricity pricing system which:</p> <ul style="list-style-type: none"> • Continues the socialised pricing system, and supports low income citizens. • Reduces the need for government guarantees. • Discourages electricity wastefulness. • Attracts private sector investment in Distributed Clean Energy Generation and Energy Efficiency. • Has fair and transparent tariffs for those consumers who can afford to pay the full cost of electricity. • Protect key industries with national importance, such as fertilizer, steel and cement production. <p>With three key actions:</p> <ol style="list-style-type: none"> i. Redesign the daytime hourly tariff for Commercial and Industrial (C and I) consumers to reduce the peak demand and the peak load on the transmission system and reduces transmission losses.

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			ii. Create regional variation in retail tariffs to reflect the different regional prices in the wholesale electricity market. iii. Publish a Roadmap to C and I market based electricity tariff to 2020 and 2025 to allow for adjustments and efficiencies.
3.	Government role	<i>Ongoing</i>	Under PMP8, the government and ODA sector should: <ul style="list-style-type: none"> • Focus on the upgrade of transmission and distribution power grids. • Allow and encourage construction and use of bio-mass, solar, wind and other clean sources of power generation for private and public users – office, residential, manufacturing, communities, and industrial. • Speed up decision making and set regulation to encourage development of offshore gas, LNG, efficiencies, and renewables.
4.	Remove the regulatory barrier to rooftop solar installations. a. Clarification of the regulations for solar rooftop energy to define the legality of	<i>Partially solved</i> <i>a. Unsolved</i> Under Official Letter No. 1210/BCT-DTDL dated 7 February 2018 of the MOIT to the VBF, it was	The VBF submission to the solar energy rooftop regulations was that a 3MW capacity plant could be implemented without a Power Operation Licence. VBF recommends that MOIT considers increasing the exemption in Circular

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	third party utility power supply agreements.	<p>clarified that pursuant to Article 3.2, Circular No. 12/2017/TT-BCT, a <u>Power Operation License</u> requirement is exempt if the installed capacity is less than 1MWp in cases where electricity generated is sold to other entities, and accordingly, rooftop solar projects with installed capacity of less than 1MWp are exempt from Power Operation License requirement.</p> <p>On 16 October 2018, the MOIT has issued Circular No. 36/2018/TT-BCT replacing Circular No. 12/2017/TT-BCT (with effective date from 6 December 2018). Under this new Circular, we understand that the threshold of 1MW remains unchanged (it is not increased to 3MW for solar energy rooftop projects as we recommended earlier).</p> <p>Specifically, Article 3.2 of Circular No. 36 provides: “Article 3. Cases of exemption from electricity operation licenses</p> <ol style="list-style-type: none"> 1. Electricity generation for self-consumption without selling electricity to other organizations and individuals. 2. Electricity generation with installed capacity of less than 1 MW (<i>1 MWp for solar power plants installed at one (1) location and with one (1) connection point</i>) to sell electricity to other entities." 	<p>36/2018/TT-BCT (Article 3.2) on power operation licenses and Circular No. 16/2017/TT-BCT (Article 11.1 and 11.2) on solar power from 1MW to 3MW to fully capture the benefits of investment in solar rooftop energy systems.</p> <p>Request urgent attention of the Ministry of Finance and the Ministry of Industry and Trade to resolve the issue and to clarify when payments/credits will be made for electricity supplied.</p>

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	b. Net Metering credits for power delivered to EVN	<p data-bbox="737 305 1066 337"><i>b. Unsolved – URGENT</i></p> <p data-bbox="737 378 1381 740">Many private developers have signed PPAs with EVN to deliver excess electricity from rooftop solar systems to EVN, they have also reported delay in the implementation of the payments under the net metering scheme under PPA. EVN has indicated to VBF that the treatment of VAT on the PPA power sales between building owner and EVN has caused a barrier to paying for electricity supplied to EVN from rooftop solar systems and indicated that it is trying to resolve the matter.</p> <p data-bbox="737 781 1381 959">Under Official Letter No. 1337/EVN-KD of Vietnam Electricity (EVN) dated 21 March 2018 sent to local power corporations regarding temporary guidelines for rooftop solar power projects/systems,</p> <ul data-bbox="737 1000 1381 1435" style="list-style-type: none"> <li data-bbox="737 1000 1381 1219">• For excess power output generated by generators to the grid systems of EVN's local power entities, the payment and finalization will be implemented only after the Ministry of Industry and Trade and the Ministry of Finance issues their specific guidelines (Item 3.c); and <li data-bbox="737 1219 1381 1435">• The rooftop solar power purchase agreement (according to the model templates under Circular No. 16/2017/TT-BCT) will be officially signed between the power seller/generator and EVN's relevant power entity after the Ministry of Industry and Trade 	

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		and the Ministry of Finance issues their specific guidelines (Item 5).	
c.	Recommended Selection Criteria for grid-connected solar energy projects in the national power development masterplan	<p><i>Unsolved – particularly relevant for the December paper are:</i></p> <p><i>Point II Grid Capacity must be strategically planned and available to meet all local licensed solar projects</i></p>	VBF welcomes the MOIT feedback and advice on the usefulness of the suggested criteria.
d.	Partnership with VBF in Energy Policy Development and Financing Strategies for the energy sector	<i>Unsolved</i>	The critically important role of the private sector is recognised by all stakeholders and a coherent engagement strategy is needed to facilitate the delivery of 70% of energy (2017 Private Sector power generation investment was no more than 4% of total) and infrastructure investment in the future from private sector sources.
e.	<p>Issue for MPI, (subsidiary role for MOIT, and MONRE and MOF)</p> <p>Vietnam’s Readiness for Climate Finance Support Mechanisms to the private sector</p> <p>GCF (Green Climate Fund) ICF (UK International Climate Fund)</p>	<p><i>Unsolved</i></p> <p>There have been no new Climate Finance mechanisms implemented that effectively support private sector clean energy in Vietnam.</p> <p>Climate Finance Support Mechanisms such as GCF, ICF wish to enable low carbon private sector businesses in Vietnam to grow and help meet the National Determined Commitment on Green House Gas emissions reductions.</p>	<p>VBF offers its assistance in developing proposals to the global and bilateral climate finance funds that help to enabling markets for private sector investment and facilitates increasing investment in Vietnam’s adaptation and mitigation of climate change impacts.</p> <p>VBF members have skills in analysing the Market Context (what can be done and what tools are needed) Financing Capacity</p>

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		The mechanism of obtaining evidence of “Country Support” for clean energy and the Non-Objection Letter process, seems to be complex, slow and difficult to conclude successfully.	(how much money can be invested, what conditions need to apply to deliver that investment) to offer and which would assist the Ministry of Planning and Investment and other interested ministries to access Climate Finance resources.
f.	Direct Power Purchase Agreement	<i>Partially solved – In progress</i>	<p>VBF looks forward to further details of the DPPA Pilot Scheme at a Public Consultation Workshop in 2018 and recommends the following:</p> <ol style="list-style-type: none"> 1. Power consumers paying the Commercial (offices, hotels, resorts and supermarkets) electricity tariff are allowed to enter the Pilot Scheme and to reduce their electricity costs, with the Wheeling Fee for Commercial Tariff adjusted upward for such consumers. 2. Pilot Scheme should set a target to create investment in at least 300MW of new clean energy generation in 2018/2019 and US\$400 million. 3. That ERAV/EVN define a “wheeling fee” as fully and quickly as possible and undertake to fix this fee for at least first 5 years of operation of the wheeling agreement and for escalation after that period agreed in conjunction

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			<p>with business groups representing power consumers.</p> <ol style="list-style-type: none"> 4. DPPA producers and end users are not required to compensate EVN retail power companies for lost “profits”. 5. Vietnam Business Forum Power and Energy Working Group is added to the DPPA Working Group, to assist all the stakeholders (including the power producers and consumers) in developing a successful pilot scheme. 6. Publish a Roadmap to Retail Power Tariffs to assist consumers to judge the relative cost of EVN supplied power v DPPA power.