Made in Vietnam Energy Plan

John Rockhold

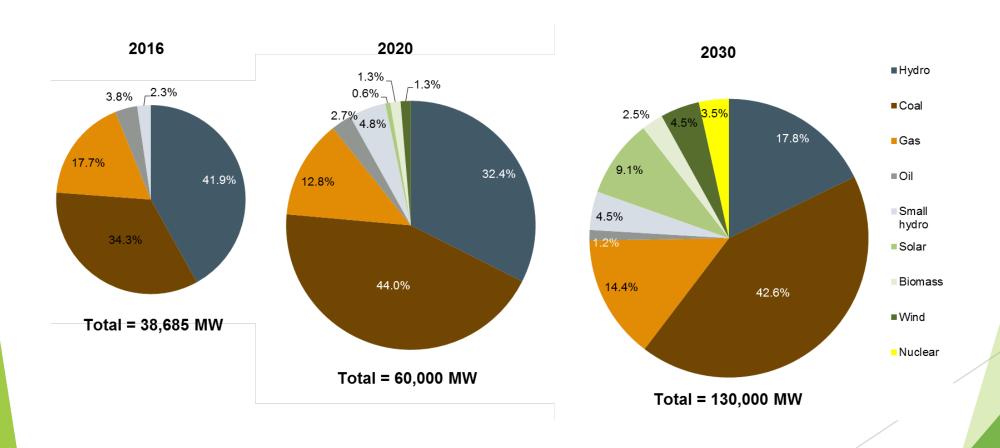
MVEP shift towards cleaner energy production and energy efficiency

- ► Government needs to consider the regulatory fixes that moves away from a favored futured coal import market.
- Stronger Vietnam energy plan that places greater emphasis on Vietnam's domestic potential for energy efficiencies, renewable energies, to be added to other clean sources of power for consumers and enterprises.
- Strong Vietnamese companies working with the government to build a better and faster system for energy production that meets Vietnam's climate commitments
- public education campaign that will raise awareness and help attract both domestic and foreign private sector investments and technology in this growing field

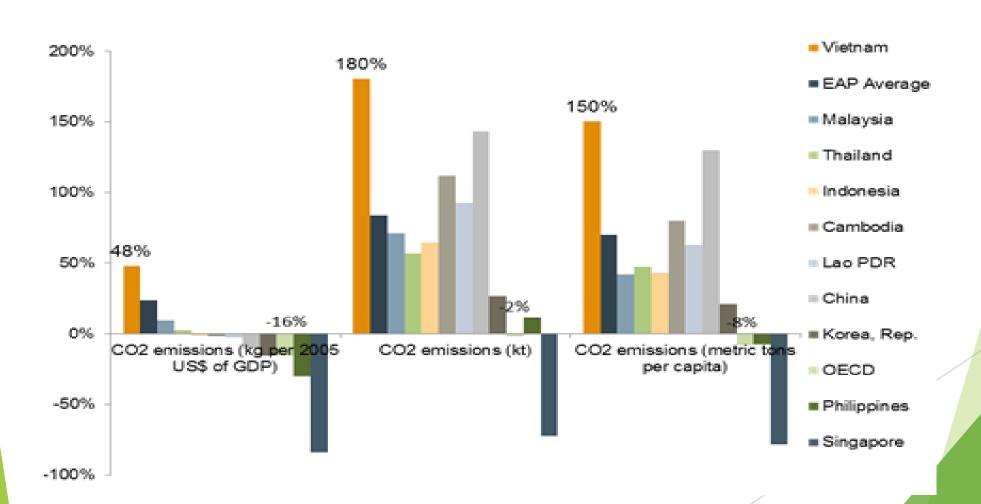
MVEP see's the strengthening of the private sector creating opportunities for new job creation, wealth creation and a better standard of living for all in Vietnam

- Uniform and transparent law enforcement, rapid technological development need not come with risks to the environment and well-being of our citizens
- Good decision making and new technology can enable Vietnam to tackle the growing environmental concerns and avoid many of the environmental problems that countries like the United States and China have experienced.

Under PDP VII, generating capacity is increasingly coal-dominated



Vietnam's carbon emissions are growing at the fastest rate in the region. World Bank (2015) Vietnam Low Carbon Options Assessment



Paris Agreement a big challenge for Vietnam under Clean Energy and Environment

- Vietnam currently ranks as the twentieth global largest user of coal-fired plants
- Vietnam under PDP VII would be burning 15 times more coal making Vietnam the eighth-largest user in the world.
- ► Green Peace and Harvard University estimated that air pollution from coalfired power plants kills around 4,300 people in Vietnam each year and that this would rise to 25,000 per year. If the Mekong Delta plants went into operation. Damage to crops considered high.
- International Monetary Fund (IMF), it is estimated the costs of health and environmental impacts of the current power development plan VII could be as high as \$15 billion annually by 2030 due to coal

The Made in Vietnam Energy Plan was developed by Vietnam's private sector businesses with financing and manpower from AmCham that would maximize Vietnam's domestic energy resources as an alternative to more imported coal. In doing so, it offers stable electricity production, a better risk-cost tradeoff, better health, lower emissions and pollution, and a better environment overall.

There are three pillars to MVEP:

- Increasing *energy efficiency*
- Further increasing the role of *renewables* in the generation mix.
- Making maximum use of Vietnam's domestic natural gas resources

Energy Efficiencies

The most recent assessment, contained in the World Bank's Exploring a Low-Carbon Development Path for Vietnam (2015) is that, by 2030, electricity demand can be reduced around 11% of projected requirements in that year. Of this reduction, two-thirds come from improved energy efficiency in industry and one-third from improvements in the efficiency of household and commercial appliances.

Renewable Energy

- ▶ Efficiencies and renewables, by virtue of the small-scale of individual projects, are far more suited to domestic financing, innovation and ownership than large coal plants. This means that the jobs and profits on these investments are more likely to be retained in Vietnam.
- When World Bank President was in Vietnam in May 2016, he said of renewables "We are bringing to the table all the tools we need to bring the costs down significantly and quickly."
- Similar countries like Mexico, India and Brazil who have invested in wind energy by attracting private investment were able to bring down wind development costs during the last five years with a combination of incentives to attract private investments, developers and foreign direct investors wanting renewable energy sources.
- More recently 2016 Vietnamese contractors have shown the ability to quickly reduce construction time and cost once technology transfer take place. Costs of wind turbines and solar continue to drop as technology becomes more efficient.

Making maximum of use for Vietnam's domestic natural gas resources

- Transfer of latest technology and production to Vietnam companies.
- Increasing the share of domestic gas in the mix returns funds to the Vietnamese Government and domestic enterprises—under current fiscal terms around 40% of the revenues from sales of natural gas accrue to the government for spending in Vietnam, up to \$7 billion in revenues per 1 GW of power
- By contrast, LNG and imported coal revenues flow abroad in most cases. The development of domestic natural gas should be maximized to reduce Vietnam's dependence on the costs and risks of imported fuel.
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Easy Energy Reforms for renewable energy and green technology

Greater use of direct power purchase agreements (DPPA) between power producers and large power consumers should be allowed, as have shown to be extremely effective in other similar countries like Vietnam. Private industries in Vietnam and other multinational corporations have publicly made global commitments to work towards using energy from renewable energy efficient projects. But policies in Vietnam today do not yet allow for DPPA. A change in this policy - allowing enterprises and consumers to have access to clean energy will attract additional investment and global brands that will help carry Vietnam up the manufacturing value chain. If GoV approves DPPA, a minimum of 1000 MW of wind power and additional solar power can be added to the grid by 2020, costing GoV nothing in capital costs and/or guarantees, GoV will an earn est. \$200 million in wheeling fees and CIT from profitable wind farms.

Easy Energy Reforms for renewable energy and green technology

▶ Power Price Road-map using Market Based Pricing to 2020 with a vision to 2025, including definition of variable pricing between the three main tariff groups - residential, commercial and industrial. The provision of actual cost information can empower consumers and investors as to the most effective way to invest in higher efficiency equipment and processes. Energy efficiency investment and innovation is not occurring in high volume now because consumers believe power prices will remain subsidized by the government. Presently Vietnam has the lowest energy price in ASEAN

Easy Energy Reforms for renewable energy and green technology

- Enhancement of EVN creditworthiness. Increasingly international donors support for renewable and cleaner energy development and procedures to assist the cost of guaranteeing that EVN will pay for power supplied under a PPA for renewable and clean energy projects in Vietnam, wind, solar, biomass, waste to energy and natural gas.
- Government to work with the private sector to import improved technology and to develop the off-shore gas reserves and infrastructure, and encourage additional exploration to bring addition gas on line as soon as possible and reduce the need for imported coal.

Thank You