Parties battle it out on small business energy blueprint

Pic: Greenhouse gases

The Victorian government has announced its own default price, while the federal government's policy would cover South Australia, Queensland and New South Wales.

Speaking to The Age and Sydney Morning Herald at the event, the minister also said he was "determined" to see the government's 'big stick' energy policies, including its forced divestiture policy, into the election campaign.

The policy includes a range of measures including powers to request a court order to force an energy company to divest assets if misusing market power.

"It is extraordinary to me that the so called friend of the worker, the Labor party, doesn't want to support this," minister Taylor said.

He also said it was also more important for small business owners, particularly in "weather sensitive" sectors like farming, to track climate data in order to help with business planning.

"My family has been doing this for 20 years – we use the CSIRO modelling of how weather is changing. There is good data out there and if you are a weather-sensitive business, you should do that work."

The energy summit heard research commissioned by COSBOA surveying 200 small businesses across Australia which found

one in ten are unable to repay electricity bills, while businesses that rent their premises are finding in harder to cope with power price increases than those owning property.

Shadow minister for climate change Pat Conroy said energy policy stability is the major issue for small businesses.

“The government has had 12 energy policies in two and a half years, and we’ve signalled our main focus is restoring stability,” he said.

Labor outlined its plan to reach a bipartisan national energy guarantee in its quest to deliver 50 per cent renewable energy by 2030.

The Australian Greens also laid out a blueprint for levelling the playing field for small businesses, including the introduction of low-cost electricity packages for businesses through a not-for-profit, publicly owned electricity retailer.

Greens energy spokesperson Adam Bandt proposed a $200 million small business “clean energy” fund to provide smaller operators with $10,000 grants for projects that improve energy efficiency.

The nation must adopt new energy paradigms

Taiwan Taoyuan International Airport recently experienced yet another sudden power outage resulting in delays for many travelers. It was the fourth outage in a year, but it was not related to Taiwan Power Co’s (Taipower) systems. It was caused

by equipment that is not managed by Taipower.

Airports in many developed countries have their own cogeneration systems to guarantee a stable multisource power supply to protect the public's rights and interests. For example, international airports in San Francisco and Los Angeles have cogeneration systems of different sizes.

In this situation, the power company is in effect a backup supplier of energy to the terminals, offering a second guarantee. In addition, emergency diesel-powered generators — which also exist at Taoyuan airport — provide a third guarantee, although they cannot be sustained for long periods and should be the last option.

This is the reason why a cogeneration system should be installed even if the power it generates is a bit more expensive.

Cogeneration systems have two other advantages. As they generate both heat and electricity, thermal efficiency can surpass 80 percent, making it one of the most efficient energy-saving solutions. This is also why many countries encourage and stipulate that power companies must purchase surplus energy generated by cogeneration systems as part of their cost avoidance policies. Taiwan is no exception.

The second advantage of a cogeneration system is that following the growing proportion of distributed energy resources, unstable solar and wind energy generation requires greater backup capacity, while cogeneration allows the flexible adjustment of the proportions of thermal and electric energy generation, making it one of the best backup systems.

This is why a developed country like Denmark estimates that cogeneration systems will continue to make up about 30 percent of total power generation capacity until 2030, while solar and wind generation will make up more than 50 percent and coal-

fired generation will provide less than 20 percent.

This means that following Taiwan's energy generation transformation toward green energy, a greater focus should be placed on the development of regional cogeneration systems and the construction of micro-grids that can operate independently and combine cogeneration with renewable energy sources.

It is worth noting that although there are more than 80 cogeneration systems in Taiwan, they all belong to the manufacturing industry and most are coal-fired. This is different from the situation in developed countries, where the main energy source is natural gas and the systems are used in the services and the manufacturing industries.

Furthermore, the vast majority of the liquefied natural gas that the nation imports is used by Taipower and private power plants for traditional power generation, which has a thermal efficiency of about 50 percent. This, unfortunately, is far less than at a cogeneration system.

The government should join the international trend toward green energy and energy savings, and pay more attention to developing a strategy for natural gas-fired cogeneration systems, which should be primarily used at service industry hubs or important buildings.

This would result in a stronger and more resilient energy system, facilitate flexible plans for a larger proportion of renewable energy generation and make stable low-carbon power supply in smart cities and communities a reality, thus guaranteeing the public's right to use electricity.

Update: Chile-Floating Solar Island story

In a story March 15 about a floating island of solar panels in Chile, The Associated Press reported erroneously that the array is 1,200 square feet. The array is 1,200 square meters.

A corrected version of the story is below:

SANTIAGO, Chile (AP) — A floating island of solar panels is being tested in Chile as a way to generate clean energy and reduce water loss at mine operations, a cornerstone of the Andean country's economy that uses huge amounts of electricity and water.

The experimental "Las Tortolas" power-generating island is being run by the giant Anglo American mining company at its Los Bronces mine, and the initiative comes as the government pushes to put Chile at the forefront of renewable energy use in Latin America and the world.

The 1,200-square-meter (12,917-square-foot) array of solar panels was inaugurated Thursday by Chilean Mining Minister Baldo Prokurica. Officials said that if the test is successful, the $250,000 plant could be expanded to cover 40 hectares, or nearly 100 acres.

The array floats in the middle of a pond that is used to contain the refuse from mining, known as tailings, and it is expected that its shadow will lower the water temperature and reduce evaporation by 80 percent. Thus, the mine would retain

more of that water for its operations and could reduce the amount of fresh water it pumps in the dry mountainous region where water is a scarce commodity.

“With this system, we can make our fresh water consumption more efficient, in line with our goal of re-imagining mining and reducing Anglo American’s fresh water consumption by 50 percent by 2030, as well as the CO2 emissions by producing non-polluting energy,” said Patricio Chacana, Los Bronces’ vice president of operations.

If the yearlong experiment works as planned, the solar panel island could be expanded and new ones could be installed at other mining ponds. Experts say there are approximately 800 such ponds in Chile.

“It is an excellent idea for the traceability of the mining industry and especially in terms of more efficient use of water. This is a company that recycles 76 percent of the water it uses in its processes,” the mining minister said at the unveiling and he encouraged other mining companies to follow suit.

In addition, Prokurica said the Mining Ministry is working on a plan to improve the safety of the mine holding ponds, to guard against failures such as one at an iron ore mine recently in Brazil that unleashed a wall of mud that killed at least 186 people and polluted hundreds of miles of river. Many of the tailing ponds in the north of the country are near urban centers.

Los Bronces is about 3,500 meters (11,500 feet) above sea level and is 65 kilometers (40 miles) from the country’s capital, Santiago. In 2018, the mine produced 370,000 tons of fine copper and 2,421 tons of molybdenum.

Almost 20 percent of the energy currently produced and used in Chile comes from renewable sources, up from 6 percent in 2013.

Opinion | When it comes to energy, the weeds is a good place to be

By David Toscano
March 15

David Toscano, a Democrat, represents Charlottesville in the Virginia House of Delegates.

We hear a lot today about the Green New Deal, a great aspirational statement that tells us much about where we want and where we need to go but often lacks specifics. The real deal on energy policy is in the details, the weeds of social and economic policy. In Virginia, that means understanding the State Corporation Commission and how it works to support or frustrate the intent of the legislature and sound energy policy.

At the end of January, a key subcommittee in the General Assembly considered legislation to cap Virginia's carbon pollution through a program called the Regional Greenhouse Gas Initiative. In the hearing, a representative from the SCC testified that the costs to Virginia's consumers from our participation in the program would be much higher than any other previous estimate or study that had been discussed much less seen.

For context, the RGGI is a market-based partnership of nine neighboring states designed to take action to lower energy

costs, reduce pollution and bolster a clean-energy economy.

The SCC staffer provided no supporting evidence or details to justify the cost estimates, which were then used as justification to oppose Virginia's involvement with the RGGI.

The SCC is supposedly apolitical, but you could have fooled many in the room that day. No one had seen the cost model the SCC cited. The SCC, because of a quirk in Virginia law, is exempt from Freedom of Information Act requests, so it cannot be compelled to provide the model to the public.

After substantial pressure, the SCC disclosed limited information in the form of a two-page letter provided to the committee chairman – not to the entire committee – and it was not considered by the members as they voted on this significant legislation. Only after the legislative session ended did the SCC provide its modeling to the Department of Environmental Quality.

The model and letter provide some insight into the staff's presentation. First, SCC staff apparently asked Dominion Energy to develop numbers using a proprietary model that is known to favor utilities and uses an artificially low price for gas.

Further, the SCC assumes that most coal plants will keep running even if the commodity is no longer competitive with gas, even projecting coal generation through 2051. Few, if any, believe this, but the SCC built this into its analysis. There are other basic mistakes in the SCC staff analysis; for instance, the SCC builds new gas capacity into its analysis to replace coal but charges all of those costs to RGGI, when it is not clear that that capacity will be needed or that Dominion would build it or procure it from an independent power producer.

The SCC model also assumed that the mandates for renewable energy and energy efficiency in the Grid Transformation and

Security Act would not be fully implemented or approved by the commission, despite that these are legislative requirements the SCC must follow.

Finally, the SCC analysis incorrectly assigns an allowance price within the RGGI program that is simply wrong. The allowance price in the RGGI is the price a polluter will have to pay per ton of carbon emitted. The SCC used a price that is significantly higher than RGGI's historical price or a forward-looking modeled price.

Even if you agree with the SCC, its analyses should be public information designed to inform the public debate. The SCC, however, has chosen a less transparent route, disadvantaging the public and the legislature from having all the necessary information to determine energy policy in the commonwealth.

New energy and climate plan stresses focus on solar power

The plan includes extensions on measures to incentivise large-scale solar farms. Photo: Jonathan Borg

---

Malta will increase its focus on solar energy under a new 2030 plan though development policies and lack of available land could hamper the shift.

The draft National Energy and Climate Plan, newly published for public consultation, lays out the government's strategy

for the next decade under the EU's long-term climate goals and Paris Agreement commitments.

It lays out key objectives for Malta of a 19% reduction in greenhouse gas emissions and a 13% share of renewable energy in final energy consumption by 2030.

Building on a move towards solar energy generation in the current renewable energy plan, the draft document includes extensions on measures to incentivise large-scale solar farms and rooftop photovoltaic panels. It suggests that solar output could reach a 260 megawatt peak by 2030 – implying a total footprint of about 3.4 square kilometres – compared to a planned 160 megawatts and a 2.7 square-kilometre footprint in 2020.

This would contribute to between 30 and 40% of Malta's renewable energy contribution while heating and cooling – primarily heat pumps – will contribute 40 to 54%.

Waste-to-energy electricity generation from the major incinerator planned to be completed by 2023 is expected to contribute only "a relatively small share".

Prioritisation of PV systems, however, could, according to the plan, be hampered by the rapid decrease in the land available for solar farm developments, pushing up costs.

Between 30 and 40% of Malta's renewable energy contribution

Moreover, planning policies encouraging the development of apartment blocks pose further problems both because of the reduction of available roof space and also by the increase in overshadowing.

The plan warns that interest in investment in renewable energy appears to be waning, with real estate investment being prioritised due to its shorter payback period and perceived longer-term benefits.

It points to the low take-up on the government's second competitive call for large-scale solar installations, where the total bids amounted to just half of the capacity on offer.

The plan proposes discussions with banks to include incentives for the installation of PVs and solar water heaters in loan policies, as well as incentive schemes for developers and real estate agents.

It also proposes building on the government's communal photovoltaic farm project at the site Il-Fiddien, allowing people without access to a private roof to buy into the shift.

Also stressed is the importance of solar water heaters, with the government aiming to provide support for the installation of 1,500 systems every year in the next decade – compared to 400 a year under previous plans – although it notes that the past few years have seen a downward trend in such systems as preferences move to PV panels.

The draft plan does not include any assessment of the impact the planned policies and measures are projected to have, stating only that this analysis will be included in the final plan that must be submitted to the European Commission by the end of the year.

The plan, which is open to public consultation until April 10, also includes the government's 2030 measures on energy security, internal energy market, energy efficiency and research, innovation and competitiveness.

Is Investing in the Global Renewable Energy Sector in 2019 a Good Idea?

The world is going green, everyone says. For businesses, this often means using more environment-friendly ways of doing business. From the perspective of an investor, going green may mean impact investing, that is making investments in schemes that aim to make a positive impact on the environment.

Investing in renewable or alternative energy has become a frequent topic of discussion in investment circles. A few statistics below show why the global renewable energy sector is becoming increasingly attractive with time:

- **Rising global energy demands:** The rapid growth of emerging economies like India and China is driving worldwide energy usage higher and higher. According to The Guardian, global energy demand will increase by approximately 40% over the next twenty years.
- **The decline in coal use:** The International Energy Outlook 2017 by the US Energy Information Administration indicates that worldwide use of coal is predicted to fall to 22% in 2040 from 27% in 2015.
- **Flat oil demand:** Demand for oil begins to flatten from 2020 and will plunge from 2028, as DNV GL's Energy Transition Outlook predicts.
- **Increasing use of renewables:** Renewable energy now makes close to 20% of global energy consumption. Alternative energy sources are predicted to be the fastest growing source of energy over the next 20 years. By 2050, solar photovoltaic, hydroelectric, and wind power will make up 85% of global electricity. (Renewables 2018 Global Status Report GSR, Ren21)
- **Falling cost of solar, wind and other alternative energy**

sources: Improved infrastructure and use of higher voltage cables have significantly reduced the cost of generating electricity from these renewable sources.

Why the global shift to alternative energy?

The world battles with global warming. The Paris Agreement on climate change signed by hundreds of countries in 2016 saw the world agree to limit the increase in global average temperature to 1.5 C and no more than 2 percent above pre-industrial levels. This will help greatly to reduce the effects and risks of climate change.

Investing in Renewable Energy

Whenever and wherever discussions on renewable energy are held, investors ask some questions, such as:

1. *What are the available opportunities to invest in renewable energy?*
2. *How profitable is investing in renewable energy stocks?*
3. *Is renewable energy a good investment?*
4. *Should I diversify my portfolio with alternative energy investments?*

Statistics clearly show that the market for renewable energy has high growth prospects. We are looking at a compound annual market growth rate of 7.5 percent, driven by world economic growth, more incentives for generation and use of renewables, and more cost-effectiveness of renewables. Many international investors have already capitalized on these trends.

If you want to diversify into this market, there are currently two well-established ways of investing in renewable energy stocks, namely: Exchange Traded Funds (ETFs), Sustainable Energy Mutual Funds.

1. Alternative Energy ETFs

An ETF is a security that mirrors or tracks a single sector, market index, or basket of assets. This means that their value fluctuates with that of the particular index or industry sector they are tracking. ETFs can be traded in real time like shares.

Sustainable energy ETFs are attractive investments for individual investors who want to invest in a diversity of financial securities in the sector. They typically have lower fees than mutual fund shares.

The best alternative energy ETFs for international investors are those that offer exposure to the world’s largest companies in the renewable energy sector. They include:

- iShares Global Clean Energy ETF (ICLN)
- Guggenheim Solar ETF (TAN)
- PowerShares Global Clean Energy Portfolio ETF (PBD)
- SPDR S&P Oil & Gas Exploration & Production ETF (XOP)
- Vanguard Energy ETF (VDE)
- Invesco DWA Energy Momentum Portfolio ETF (PXI)
- iShares U.S. Oil & Gas Exploration & Production ETF (IEO)

Source: Investopedia, EFTdb.com

2. Sustainable Energy Mutual Funds

A renewable energy mutual fund is an investment vehicle in which investors pool funds to invest in alternative energy companies. Mutual funds take the form of a company, which has the responsibility of investing in viable securities that can provide each investor with a return for their investment. As an investor, you buy shares in a mutual fund.

Examples of alternative energy mutual funds can be found at altenergystocks.com

Important Considerations

The risk is an inherent element of any type of investment. Investors need to carefully consider the risk factors associated with investing in renewable energy stocks before putting in their money in the sector.

It is also noteworthy that investing all your funds in one sector increases the risk of your investment as all your returns are dependent on the performance of the sector. Diversify your investment portfolio across different sectors, asset classes, and geographical areas. Your decision to invest in renewable energy companies should, therefore, be a part of a larger plan to build a well-balanced portfolio with other types of investments.