Perspectives Series – Thoughts on an Energy Strategy

26 April 2022

Purpose

1. The draft Emissions Reduction Plan indicates that the Government will develop a New Zealand energy strategy. This Perspectives Note offers our views on the critical success factors and potential pitfalls that Government, officials and the business community should bear in mind as the strategy is devised and consulted on.

Background

2. The Climate Change Commission's ("the Commission") May 2021 Final Advice to Government recommended it develop a New Zealand energy strategy. In response, the October 2021 Emissions Reduction Plan consultation document accepted this recommendation and committed to develop one after the Emissions Reduction Plan is published in May 2022.[1] The Government's proposal is quoted below:

> ### A New Zealand Energy Strategy
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> Once the emissions reduction plan is in place, we will develop an energy strategy to consider priorities, challenges and opportunities for a successful transition. This is in line with the Climate Change Commission's recommendation for a strategy to decarbonise the energy system and ensure the electricity sector is ready to meet future needs, and responds to suggestions from the energy sector to draw various pieces of work together into an overarching strategy.
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> The Commission recommended that a strategy:
>
> 1. sets targets for the energy system
> 2. ensures access to affordable and secure low-emissions electricity for all consumers

[1] New Zealand did have in place a National Energy Strategy from 2011-2021 (formed under the previous National-led Government), and the Energy Efficiency and Conservation Strategy 2017-2021 has been rolled over pending replacement. In our assessment, neither has been routinely referenced by the Government nor officials in at least the last few years.

3. manages the phase out of fossil fuels (including planning for the diminishing use of fossil gas in the energy system, and phasing out coal for electricity generation).

This strategy will need to be considered alongside the Commission's other recommendations (such as a bioeconomy strategy and a plan for decarbonising industry), and existing strategies such as the New Zealand Energy Efficiency and Conservation Strategy (NZEECS).

A first stage will be to determine what an energy strategy could address and how it would define a pathway, as we make the 30-year transition towards our 2050 target.

Government strategies have understandable appeal …

3. We understand the general appeal of government strategies. The world is an increasingly complex place, requiring difficult decisions involving trade-offs often based on incomplete and imperfect information. In theory, strategies can be effective directional tools to inform decision-making in pursuit of an objective, while balancing the implicit trade-offs in a consistent and coherent way.
4. We list below what we see as critical success factors in an effective government strategy. We have bolded some key concepts, which we will discuss further as they relate to the proposed energy strategy.
5. Done well, government strategies should:
   - ***provide a clear and credible objective***. In public policy, the purpose of setting an objective or goal is to clearly articulate what outcome or outcomes are sought from a policy intervention or business and consumer response;
   - ***identify the trade-offs*** to be resolved in pursuit of this objective. This also means setting out frameworks to guide policy development and to evaluate its effectiveness;[2]
   - ***sit within a broader economic narrative***. Any sector strategy should be situated in the context of the broader economy and society, including national ambitions for growth and prosperity. It should not pursue sectoral objectives for their own sake in isolation, but rather those that support a broader set of national goals;
   - ***guide decision-making on subsequent plans and details***. Good strategy should come before governments, consumers and/or businesses start to make long-term commitments to courses of action; and
   - ***provide flexibility***. A strategy should provide firms and households with long-term confidence about the 'rules of the game' to support investment of time and resources, while preserving flexibility to respond to changes in context (technological, economic, etc).

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[2] A good framework, informed by a clear and credible objective, enables proposed policy interventions and other possible courses of action to be:

- assessed ex ante in terms of their expected effectiveness in delivering on the objective, and
- monitored ex-post in terms of their actual delivery.

… but the reality often falls short

6. The discipline required in designing and executing good strategy – as described above – is easily defeated by the temptation to attempt do everything, or to be all things to all people. Good strategy is as much about what it does not do, as it is about what it does do.
7. Too often, from our practical experience, ineffective government strategies:
    - downplay trade-offs, instead seeking significant improvement across multiple objectives – even where these objectives are in tension (i.e. not making choices);
    - are too broad in scope and ambition, undermining their credibility and relevance;
    - fall victim to rent-seeking, special pleading, and 'picking winners';
    - lack the broad and enduring support needed to survive political cycles, drastically reducing their effectiveness and reliability in long-term capital-intensive sectors; and
    - are overly prescriptive, becoming de facto central plans, emphasising *targets, activities and programmes* instead of focusing on *principles and frameworks*.
8. The following section sets out our current view on the proposal for an energy strategy, as laid out in the Emissions Reduction Plan consultation document, and the extent to which we see early signs of the critical success factors we identified earlier.

Does the proposal for an energy strategy have the early ingredients for success?

A clear and credible objective

9. A strategy must have a clear rationale and it must identify the problem the strategy intends to solve. It must not only be clear why we need a strategy per se, but also what the strategy itself will achieve. Recognising that development of the energy strategy is in its very early stages, we have not yet seen either case properly articulated.
10. Commentators often cite business calls for an energy strategy. We observe that many such calls emphasise our point above: that a strategy ought to be as much about articulating what government *will not* do as what it *will* do. For this reason, we see these calls largely as a defensive response to the recent cacophony of contradictory policy signals, and an attempt to de-risk business investment in a correspondingly unpredictable policy environment.
11. Read in this way, these calls are not grounds for a strategy that merely codifies existing direction. On the contrary, they suggest a first-principles assessment of the situation is required. Business is calling for policymakers to stop, take stock, and take a breath. If an energy strategy is pursued, its core objective should be to bring these contradictory policy signals into harmony.

Trade-offs and a framework(s) to navigate them

12. The defining trade-off in the energy sector is the 'energy trilemma'. An optimal energy transition must balance trade-offs between three critical factors, namely:
    - energy equity/affordability;
    - energy security; and
    - environmental sustainability.
13. Although it is possible (or even desirable) to have a particular focus and area of priority, if one factor of the trilemma is overly emphasised without due consideration to the other two factors, it can result in undesirable consequences. A good energy strategy should not just emphasise one strand but should, overall, be balanced.
14. The approach implied by the Commission and the Emissions Reduction Plan consultation document appears overwhelmingly focused on the reduction of emissions within the energy sector, without explicit framing in the energy trilemma. The Commission recommends an energy strategy focused on secure, affordable supply of renewable electricity – with the first two dimensions (security and affordability) dedicated towards achieving the third, rather than the three in some form of tension/balance. This reduces the ability to maximise choices and trade-offs as the balance is maintained over time.

A broader economic narrative

15. Further, this implied focus on emissions *within* the energy sector risks a strategy that acts in isolation. Failure to seat an energy strategy in the context of a broader economic narrative would mean an emissions reduction focus can be at the fore, but risks having inadequate regard to the actual energy needs of the society and economy that the sector is ultimately meant to serve. Similarly, it can result in emission reductions where they ought not to be made. In an increasingly complex and interwoven world, a systems approach is required.
16. A strategy not designed in this way would likely lead to a narrowing of fuels and technologies available under the relatively narrow direction set, which (as quoted in the introduction) emphasises "low-emissions electricity" and the "phase out of fossil fuels". This contrasts with a more open set of energy choices, allowing a wider range of fuels while using climate policy to mitigate net emissions to socially efficient levels.

Strategies should guide decision-making on specific plans

17. In our view, the development of an energy strategy appears to have been left too late in the policy process, regardless of its merits or demerits. We note with concern that the October 2021 Emissions Reduction Plan consultation document stated:

    > "Once the emissions reduction plan is in place, we will develop an energy strategy to consider priorities, challenges and opportunities for a successful transition."

18. This sequencing is not aligned with an ideal strategy development process in the normal and proper sense of the word and concept, and this hardly instils confidence. A sound strategy should outline, at a high level, how determined

objectives can be achieved. Any plans and detail should come after that and will be informed by the preceding strategy.[3]

19. A strategy developed this late in the piece may end up as little more than a mere 'bolt-on' and somewhat a codification of policies already determined as opposed to a framework against which they should have been tested. A key measure of success for any new energy strategy will be whether its principles and frameworks are genuinely applied to plans and programmes that have already been initiated – i.e. whether it starts to bring incoherent existing policies into harmony.

Provide flexibility

20. The current approach feels to be disproportionately focused on "certainty" (in the undesirable 'hardwiring' sense) at the expense of flexibility. The Commission's recommendations imply that choices about fuels and technologies should be made at the outset, but this drastically constrains the options in front of us and stifles innovation. This necessarily leads to second-best outcomes. We revisit this point in more detail later.

The best hope for success is an energy strategy that goes 'back to basics'

21. Given the current context of declining investment confidence in firms and households, a well-constructed energy strategy should be somewhat conservative and stabilising. It should re-enshrine key principles to promote confidence, by:
    - setting the direction of travel, but with a focus on credibility, stability, durability and predictability;
    - committing to technology and fuel neutrality, thereby preserving flexibility for private sector investment and innovation;
    - using the trilemma as its core analytic and accountability tool;
    - committing to a classical public policy approach, as distinct from arbitrary and capricious decision-making;[4] and
    - setting clear 'no-go' parameters for government policy, as well as triggers and parameters for regulatory intervention.[5]
22. A good energy strategy should be fundamentally aimed at delivering sound energy policy that supports energy outcomes. In our view this is essentially one wherein the reliable supply of affordable energy meets demand in a way that meets social and economic objectives. To the extent that that there are negative

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3 In the case of government strategies, we consider that businesses and individuals should undertake the planning as opposed to government.

4 When considering the status quo and pathway to a better functioning energy market it is important to maintain a disciplined focus on genuine and material market or government failures (as opposed to normatively disliked outcomes). In considering regulatory interventions, a full analysis of costs, benefits and risks (including risk of government failure) is necessary.

5 Ideally, such a strategy would, either explicitly or implicitly, rule out chilling interventions such as the Lake Onslow pumped hydro proposal.

externalities involved along the way, such as greenhouse gas emissions, then the right tool for the job should be employed to resolve that.

23. In the case of emissions, the right tool is climate policy, which can and should be delivered through the ETS. Climate policy should not be achieved through energy policy, as it is not the optimal tool for the job. Indeed, over-emphasising climate objectives throws energy policy off balance and worsens trilemma outcomes and misallocates resources, to the detriment of both the energy system and national economy. We have already observed early evidence of this.
24. In short, an energy strategy should not be a climate change strategy in drag. Nor should it be a national socio-economic transformation strategy. It must focus on the fundamentals of the energy sector while demonstrating its connectedness to the wider economy.

We see major risks in adopting an overly specific and 'plan-like' energy strategy

25. Those preparing an energy strategy should ensure they are aware of the behaviour the very process of preparation may drive from both current and potential sector participants. Specifically, the strategy development process *per se* can become a vehicle for rent-seeking, with firms calling for subsidies, concessions, featherbedding, and the picking of winners.
26. This risk is elevated further if the strategy is one that gets into plans and specifics as opposed to being directional. Specific targets can incentivise businesses to claim they can deliver on proposed government milestones and targets, saying, for example "with $*x* subsidy we can deliver your goals!". In short, overly specific *milestones* can in fact become *millstones*, stifling innovation and misdirecting resources. Further disruption results when such plans are inevitably unwound.
27. Market failure - however broadly or loosely defined – is frequently invoked in justification for government intervention. Equally deserving of analysis and consideration is the risk of government failure.[6] Extreme care must be exercised when considering implementing any government policy, strategy, or plan as it may in fact make a situation worse.[7]

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[6] Note that our use of the term government failure is not intended to convey a political judgement nor is it necessarily pejorative. We use the term in its traditional public economics and public administration sense whereby government policy can lead to a misallocation of resources.

[7] Key examples of government failure include the following:

- political failure - legislation responds to interest groups at the expense of the general public;
- bureaucratic failure and public choice theory- government agencies may seek to advance their own interests (e.g. expanding budgets and influence) rather than addressing the problem warranting intervention in the first place;
- judicial failure - slow, costly and uncertain legal processes can arise from new policies;
- regulatory capture - agencies can end up captured by stakeholders in the regulated industry; and
- regulatory creep - where additional costly regulations are needed to manage unintended consequences of the original policy).

Plans in action

28. We note recent comments from the Minister of Energy and Resources, Hon Dr Megan Woods, where she outlines her view that an energy strategy would allow the Government to be "volumetric" in the way it looked at future energy needs. The Minister's comments include:

> "Policy regarding gas demand and supply will be considered alongside the Energy Strategy to ensure the best outcomes in terms of the energy trilemma: supply, security, and affordability;

and

> We know how much gas we're going to need for a transition. We'll also know how much is consented, so we'll have a good evidence base for making subsequent decisions.

and

> We know what we're going to need for a phase-out, we know what the build-up will be, and we know what the phase-down will look like, we know what volumes will be required." [8]

29. These remarks are somewhat surprising. Given the dynamic nature of the economy, future demand is simply and literally *unknowable in advance* as too many factors can change, including technology, substitutes, supply, consumer preferences, geopolitics etc. Making prescriptive policies on the basis of long-term forecasts is not the place of a strategy. It instead becomes a de facto central plan. These quotes speak to a level of government planning beyond any comprehension, which is exactly where a misdirected energy strategy can err at great cost to society.[9]

30. In reality there can be no Palace of Crystal, no utopian place of pure rationality. The world is far too complex, meaning centrally driven economic calculation does not work, and government strategies should never act as if it does. Dostoevsky presciently warned against the central planning that would follow in the twentieth century, and we ourselves must be careful to protect a future of liberal markets and decentralised decision-making.

31. Recently popular in more interventionist quarters is the work of economist Mariana Mazzucato - *Mission Economy: A Moonshot Guide to Changing*

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[8] New Zealand Herald. Energy Strategy: Extending oil and gas ban on table for Government. Dated 17 April 2022. Source: https://www.nzherald.co.nz/nz/politics/energy-strategy-extending-oil-and-gas-ban-on-table-for-government/UAUELINJ7V7ZOKXGZUXRTNG4K4/

[9] Classic literature can often shine a light on contemporary phenomena. In 1864 Fyodor Dostoevsky wrote the novella Notes from Underground, where the protagonist, a bureaucrat, says:

> "...All human actions will then, of course, be tabulated according to these laws, mathematically, like tables of logarithms up to 108,000, and entered in an index; or, better still, there would be published certain edifying works of the nature of encyclopaedic lexicons, in which everything will be so clearly calculated and explained that there will be no more incidents or adventures in the world.
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> Then - this is all what you say - new economic relations will be established, all ready-made and worked out with mathematical exactitude, so that every possible question will vanish in the twinkling of an eye, simply because every possible answer to it will be provided. Then the "Palace of Crystal" will be built."

Capitalism. Citing the success of the NASA moon landing project, Mazzucato proposes an expanded role of the state in addressing a range of complex societal problems.[10] Under an energy strategy gone wrong, this interventionist philosophy (even if warranted in the right circumstances) can easily be channelled into overly specific all-encompassing plans and this risk should be kept in mind when considering the initial allure of a government strategy.

Additional thoughts on objectives proposed by the Climate Change Commission

"Set targets for the energy system"

32. An overly specific energy strategy could (counterintuitively) hardwire uncertainty and commercial risk into the sector. The proposal to "set targets for the energy system" raises important questions for businesses and consumers, including:
    - "What happens if they are not met?"
    - "What if the targets change?", and
    - "Will there be regulatory intervention to achieve them?".
33. Targets constrain optimisation and the efficient allocation of resources, thereby forcing second-best outcomes. As covered earlier, targets can also be a recipe for rent-seeking, whereby firms lobby government for inefficient policies or subsidies to help achieve an arbitrary goal by an equally arbitrary date. An example is firms seeking biofuel mandates which force undesired and higher cost fuels upon consumers in the hope that they will eventually be economic at a time of energy cost pressures. Governments should not adopt targets without both eyes open.
34. While conscious that some may grow weary of our refrain on this, we genuinely consider and must again restate our view that the only target needed is *net-zero emissions at the national level*.
35. A deeply valuable insight from the Interim Climate Change Committee was that a renewable electricity target would have perverse consequences in the broader energy system and recommended a focus on electrification of transport and process heat instead. The logic of this can and should be taken one step further. An energy target is not appropriate either, and the focus should appropriately be elevated to the level of the whole economy.
36. The Commission proposed a target of 50% renewable energy by 2035. Such a construction leaves no room for technologies such as blue hydrogen (steam reformed hydrogen using carbon capture) – even though carbon capture and storage is a technology widely accepted internationally as vital in achieving global emission reduction targets.[11]
37. The focus should be on net emissions rather than fuel types or technologies. As a second-best option, if the government were to adopt any quantitative energy target (something we are generally sceptical of), the target must be about low

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[10] We note that running a discrete project with practically no budget constraints is vastly different from getting involved in an infinitely complex economy made up of disparate actors.

[11] https://www.iea.org/fuels-and-technologies/carbon-capture-utilisation-and-storage

emissions (the desired outcome) and not renewables (one of the inputs to achieving the desired outcome).[12]

"Manage the phase out of fossil fuels"

38. We need not labour the point that we oppose a proposed strategy objective to "manage the phase out of fossil fuels", as we have covered this frequently. The international treaties and domestic legislation are clear that the goal is net-zero emissions (i.e. gross emissions minus offsets). This means that different compositions of the energy mix are simply not what matters, provided they achieve the overarching goal of net zero emissions.
39. Embedding this goal into the strategy would send an unambiguously negative signal and will foreclose future options. An end-point specific proposal to "manage the phase out of fossil fuels" [emphasis added] creates significant uncertainty for investors and companies holding fossil fuel assets. Upstream petroleum investors would interpret this as a further derogation of their ability to help maximise the value of the resources they extract for the Crown under the Crown Minerals Act.
40. Although it is relatively plain to see that this is, in fact, the desired outcome, embedding such a goal in an energy strategy will deter the very investment that is widely recognised as required to stabilise the energy market. At a time of significant geopolitical uncertainty it is bitterly ironic to make it more expensive to reach our net zero emissions objectives even if it is taxpayers and not end consumers who are bearing the cost.

A good energy strategy needs friends

41. Notwithstanding our concerns laid out in this note, we can support the Government adopting a national energy strategy if it is orientated correctly, is pitched at the right level, and enjoys political buy-in across the aisle to ensure durability.
42. Our suggestion is that such a strategy should be complemented by an energy accord – in the spirit of a collaborative approach similar to the Construction Sector Accord.
43. An accord would recognise and help address the growing systemic complexity we now face. It would codify a joint commitment between sector participants and the Government to work together to support a vibrant and well performing energy resources sector. An accord would create a framework and platform for government and industry to jointly consider and address key challenges in the sector. These could include security of supply, affordability, environmental sustainability including emissions, the regulatory environment, and skills and

[12] This is because:

- not all renewable generation is low emissions (for example, high emitting geothermal fields which can produce a similar emissions footprint to natural gas-fired generation);
- all generation, including renewables, contains embedded emissions created throughout the asset lifecycle, and those embedded emissions should be taken into account; and
- hydrocarbons can be used with carbon capture and storage or other offsets to reduce emissions.

training. This list is far from exhaustive and highlights the complexity in the sector. It necessitates genuine collaboration between businesses and the Government.

44. We distinguish this approach from a top-down energy strategy in which the strategy happens *to* the energy sector rather than *with* it.

Summary

45. We are generally sceptical of government strategies. They tend to over promise; lack durability (and hence usefulness); and look like 'central plans' as opposed to overarching directional tools that lead to the optimal allocation of scarce resources.

46. A good strategy should:

- clearly identify credible objectives;
- sit within a broader economic context and narrative;
- identify trade-offs and a framework to tackle them;
- guide decision-making on future specific policies (by nature and sequencing); and
- balance predictability with flexibility in pursuit of its objectives.

47. If a New Zealand energy strategy is developed and adopted, it should be rounded out with an energy accord between government and the sector to give it meaning, provide a platform for resolving issues along the way, and to ensure that agreed actions occur.

48. Energy Resources Aotearoa will engage early and actively with the Government and officials to help shape a strategy that embodies the critical success factors we have laid out in this note. The stakes are too high for an energy strategy that falls short.