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Trade-Offs and Transition:
Lessons for Accelerated Infrastructure Delivery

Dr Cathal FitzGerald
Senior Analyst, NESC

IGEES Strategic Policy Discussion Series
May 27th, 2026

Background

- About NESC
  - Research, dialogue, and advice for the Taoiseach
  - Representative body with consensus view
  - Strategic, medium-term issues
  - Fuse the economic, social, and environmental
- NESC Energy Work Programme 2024/25
- Examine Ireland's energy transition through four 'lenses'
  - Household resilience;
  - Trade exposures;
  - Systems analysis techniques; and
  - Economic resilience

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- Policy headed into fog
- Actors not on same page
- Absence of agreed answers to fundamental questions
- No evidence-based pathway to decarbonisation
- Actions needed now, next, and later to clear the fog
- **Latest example of persistent problem across sectors**

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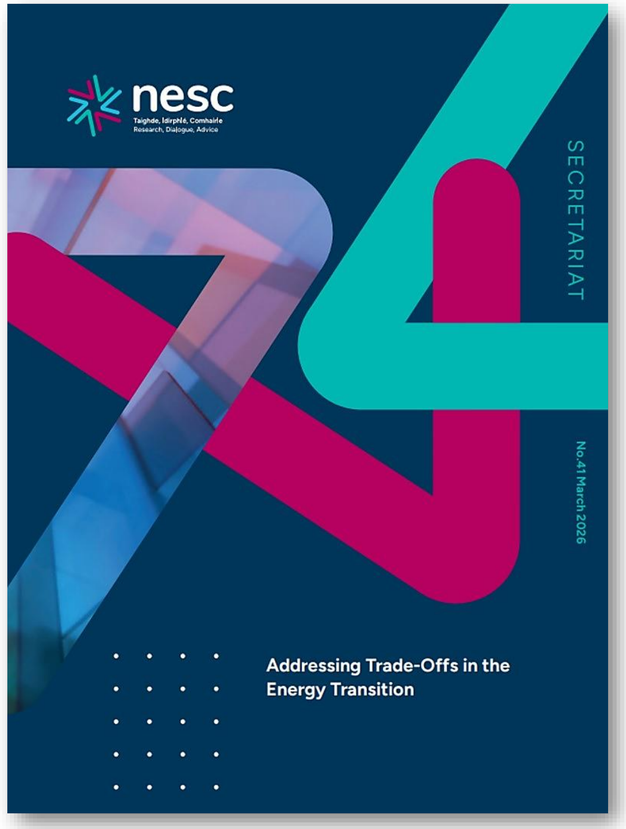
A Focus on Trade-Offs

- The energy transition must be delivered and must be successful
- Trade-offs in all policy areas- ‘to govern is to choose’
- Pursuit of one policy objective can negatively impact another
- Trade-off at the heart of energy transition
- Energy system must be environmentally sustainable…
- …and secure, affordable/competitive, and socio-politically acceptable
- To what extent have these trade-offs been confronted and resolved?
- Well-developed policy and institutions in place for the transition
- Ambitious, legally binding targets adopted



Milestones

- Kyoto Protocol, 1997
- Government White Paper 1, 2007
- EU Renewable Energy Directive, 2009
- Doha Amendment, 2012
- Paris Agreement, 2015
- Climate Action and Low Carbon Development Act, 2015
- ***Government White Paper 2, 2015***
- Citizen's Assembly on Climate Change, 2017
- Joint Oireachtas Committee on Climate Change, 2019
- Programme for Government, 2020
- Climate Action and Low Carbon Development (Amendment) Act, 2021
- CAP targets, Carbon Budgets, and Sectoral Ceilings…

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Missed Opportunities

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What energy system configuration has a cumulative emissions trajectory
towards this target, is secure, is reliable, is viable, is affordable, is competitive, and is socio-politically acceptable?

What/where is the evidence-based pathway to achieving this target, which reconciles national environmental, social, and economic objectives?

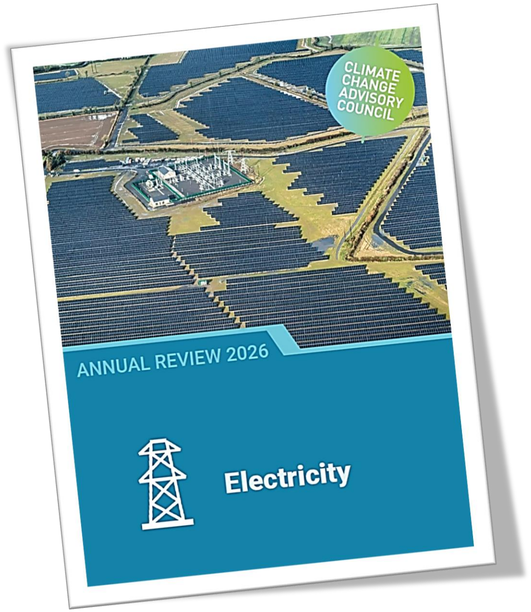
What are the non-negotiables?
Is the social license in place?
Where is the foundation for action?

Impact of Unresolved Trade-Offs: General

- Poor policy and progress due to increased ambiguity, incoherence, uncertainty, and risk
- Results in short term, more (politically) palatable decisions, and even ‘placebo policies’ (Mazey and Richardson, 2022)
- Hinders strategic vision, and can lead to ‘successful failure’
- Problems can be ‘stored up for the future’, making subsequent policy decisions even harder
- Generate disillusionment and cynicism, reduce faith in the system, and polarise debate…
- … responded to with increased political ambition and ‘stretch’ targets
- Shift in focus to ‘what is needed’ as opposed to ‘what can actually be delivered’
- Contributes to cognitive dissonance: targets adopted/maintained/repeated despite evidence
- Targets are stretched without also stretching the policies, capabilities, and measures
- Cognitive dissonance also mitigates against necessary adjustments to policy
- Reduces the ability to achieve what needs to be achieved

Impact of Unresolved Trade-Offs: Transition (1 of 2)

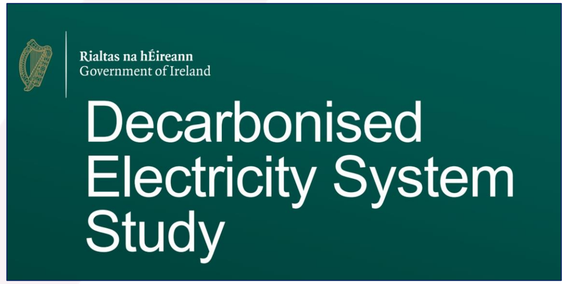
- Frustrating pace of progress
- Only 0.6 GW of new solar and 0.2 GW of new wind capacity added in 2025
- Failed to achieve multiple targets, including for:
  - The generation capacity of both onshore wind and solar;
  - The system SNSP limit and dispatch-down; and
  - The renewable electricity share of demand.



"The National Economic and Social Council **(NESC) has** previously **recommended developing a long-term national plan** for strategic clean energy reserves based on zero-carbon fuels and has more recently recommended that this ambition be expanded **to address the whole energy transition and the roles of different parts and layers of the Government in its delivery**" (CCAC, 2026: 25)

Impact of Unresolved Trade-Offs: Transition (2 of 2)

- Gaps in our knowledge and strategy in key areas:
  - Power sector decarbonisation;
  - Offshore renewable energy;
  - Energy security; and
  - Digitalisation.



- Harmful absence of clarity and certainty; missing the point? A quasi-'Junker Curse'
- Know what to do, but not in a way which simultaneously achieves valid national objectives
- Legislative contortions in relation to security of supply (LNG) and connectivity (airport cap)
- Raised public expectations (cheap, reliable, renewable electricity; exporter of energy)
- Tendency to look to the longer-term, where trade-offs have been resolved
- Cognitive dissonance in policy and target setting; parallel (policy) universe and discourse

Why are trade-offs left unresolved?

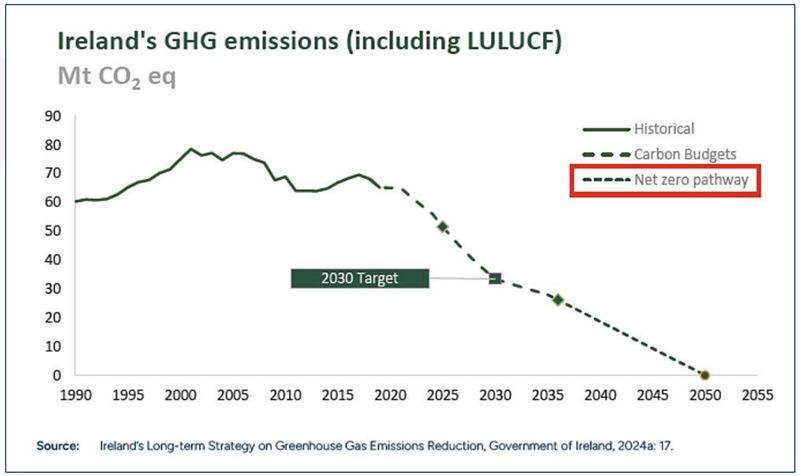
- Not ignorance or negligence: successfully reconciling trade-offs is exceptionally difficult
- Requires the capacity, structures, time for effective engagement on specific policies/ projects
- Vast quantities of data may be required to begin to understand the inherent trade-offs
- Requires strong politics and politicians, and legitimacy from the public to act
- Cultural, behavioural, and political reasons

A Focus on Costs

- “Renewable electricity… will ultimately provide cheaper, green electricity to the consumer” (DECC, 2024)
- 69 per cent of citizens believe transition policies will reduce energy bills (European Commission, 2024)
- “The transition may result in higher, not lower, electricity prices, challenging national competitiveness and the transition narrative” (NESC, 2024)
- Ireland yet to choose: Scaling VRE, meeting rising demand, and ensuring energy is affordable and secure? (IEA, 2025)
- Average estimated household electricity bill: 2021 ~ €1,250; 2025 ~ €1,900
- Mind the capability-expectation gap e.g. NEAT work and outputs. What are the causes of higher costs and levers?
- Mind the costs ‘from turbine to toaster’, ‘from solar PV to smart TV’
- Mind specific power costs on a bill: making (35%), managing (25%), moving (20%), policy (10%), retailing (10%)
- Mind the emphasis on the retail - wholesale link; “The Price Is Wrong” (Christophers, 2024)
- Mind the spark gap: e.g. electricity to gas price ratio in Ireland: >3x; Sweden: 1.3x, Netherlands: 1.5x, Portugal: 1.7x
- Mind the narrative: don’t gaslight consumers; reset if needed – too much at stake.

Time to act

- Beware ‘the obstructionist wolf in pragmatist sheep’s clothing’
- Beware the ‘culture war’
- Insert impetus to help defeat obstruction and delay
- Five initial steps are proposed:
    1. Work harder to better address transition trade-offs;
    2. Place a new emphasis on feasibility;
    3. Enhance energy transition modelling;
    4. Tell a story of transition that isn’t only looking to the horizon; and
    5. Supplement the Accelerating Infrastructure Action Plan.
- Steps expanded upon in NESC Secretariat Paper No. 41



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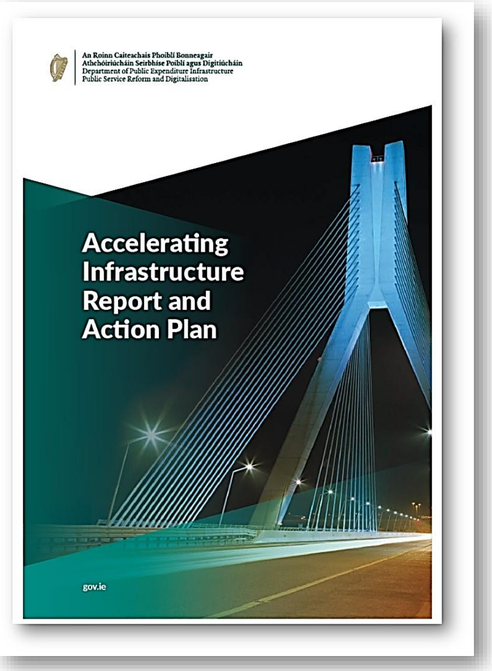
Trade-Offs in Infrastructure Delivery

- Between sectors (e.g. finite resources for housing, enterprise, transport, water, energy, education, and childcare)
- Within sectors (e.g. social, affordable, market housing targets with finite resources)
- Between valid objectives:
  - **Private rights**, the public good, environmental protection, and **urgency**
  - Appropriate **regulation**, administrative burden, adequate standards, and **urgency**
  - Delivering infrastructure **plans**, targets, and projects, and capacity constraints / **inflationary impact**
  - Addressing **urgent issues** and **EU/national commitments** (e.g. traffic congestion/airport capacity/energy security, and GHGs)
  - Legislative, regulatory, and policy **reform** and maintaining **certainty**
  - Consumer **protections**, rate of returns, and the **attractiveness of investing**
  - Direct charges / **user pays**, and social and **political stability**
  - Attracting international delivery **skills**, and ensuring **adequate housing** and services
  - Supporting the **digital economy**, and delivering **energy infrastructure** capacity
  - Ensuring **energy security** back-up, and progressing **decarbonisation**
  - Commitment to **cheaper** and cleaner services, and **funding** the associated infrastructure (e.g. electricity)
  - **Short-term** investment and **long-term** implications (i.e. temporal trade-off)

Accelerating Infrastructure Action Plan

- Many welcome and urgently needed actions set out in the Plan
- Can address legal, planning, regulatory, social, and operational barriers
- What about cultural, behavioural, and political considerations?
- Absent from the Plan… ‘trade-offs’ not mentioned at all
- Not a criticism: not its intention; may be a function of the evidence-base
- Some actions will help:
  - National Planning Statements (Action 8);
  - Risk Appetite Statements (Action 20);
  - Utilities and Local Government Clearing House (Action 21);
  - Leadership Support (Action 28);
  - Government Communication (Action 29); and
  - Benefits Realisation Framework (Action 30).



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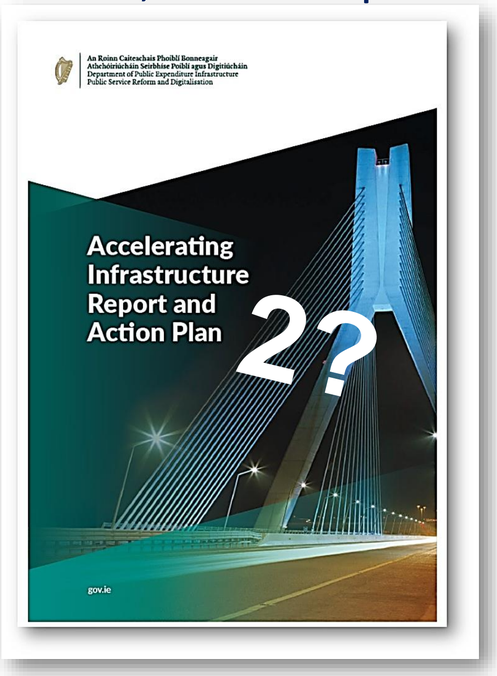
Looking Ahead – A New Accelerating Infrastructure Strategy

- Implement Accel. Inf. Plan to address legal, planning, regulatory, social, and operational barriers
- Undertake work to confirm and address cultural, behavioural, and political considerations, for example:

1. Failure to fully understand, confront, and resolve trade-offs;
2. Poor policy dialogue;
3. Inconsistent policy positions;
4. Low alignment capacity, particularly at the centre of Government;
5. The impact of the electoral cycle and political competition;
6. Cognitive dissonance; and
7. Risk aversion, policy sclerosis, and systemic cynicism.



- Such barriers, including ‘trade-offs’, cannot be legislated away!
- Opportunity for IGEES work? See ‘Ten Key Knowledge Gaps’ in NESC Council Report No. 167

cathal.fitzgerald@nesc.ie

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