Pathway to Electrification: Integrated Energy Plan

REPORT ON WHAT WE HEARD

The ACT is set to become the first Australian jurisdiction powered exclusively by renewable energy, by 2045.

To get there, we need to start the journey to transition away from fossil fuel energy, like fossil fuel gas, petrol and diesel, now.

As part of the Pathway to Electrification, the ACT Government is developing an Integrated Energy Plan (IEP) that will set out the pathway to transition the Territory to its electric future.

The ACT is already powered by 100% renewable electricity and is a global climate action leader in the journey to reach net zero emissions. However, with fossil fuel gas accounting for over 20% of ACT emissions, and transport accounting for more than 60%, we still have a long way to go in our journey to reduce emissions.

The Integrated Energy Plan will provide a clear strategy for how the ACT will transform its energy systems to:

- secure an affordable and sustainable energy future
- support a fair and equitable transition to net zero emissions from fossil fuel energy over the next two decades
- transition away from fossil fuel gas and ensure a reliable and affordable energy system.

The Integrated Energy Plan will outline how we engage and support energy consumers and establish collaborative partnerships so we can deliver on these objectives.

The Integrated Energy Plan will be delivered in three stages from 2024 out to 2040:

- Integrated Energy Plan 1 (2024 - 2030)
- Integrated Energy Plan 2 (2030 - 2035)
- Integrated Energy Plan 3 (2035 - 2040)

THE CONVERSATION

During August and September 2023, the ACT government sought community and stakeholder feedback on the proposed policy directions and key focus areas of the Integrated Energy Plan. Specifically, feedback was sought on the IEP Principles, stages and key focus areas in the Position Paper.

The ACT community contributed to the consultation by:

- making a formal submission
- completing a survey through the YourSay platform
- answering questions through the YourSay platform comment boards
- participating in a webinar, forum, industry or community focus group.

WHO WE ENGAGED

Across the consultation period community members and stakeholders engaged in a variety of ways. This looked like:

- 157 community survey responses
- 15 decarbonising commercial gas use survey responses (for large gas users only)
- 52 submissions (34 organisations, 18 community members)
- 56 industry forum participants
- 33 webinar participants
- 71 workshop participants (across three events)
- 35 focus group participants (across four events)
- 7 phone interviews (commercial and industrial gas users)
- 17 ideas wall comments

Homeowners were the largest group represented (72% of survey respondents were homeowners), followed by members of body corporates/strata managers/executive committee members and industry organisations.

The following organisations made formal submissions and/or contributed to other engagement activities:

- A/C Design Services (Qld) Pty Ltd
- ACT Owners Corporation Network
- ACT Council of Social Services (ACTCOSS) and Care Financial
- ActewAGL Retail
- ANU Institute for Climate, Energy and Disaster Solutions
- Australian Institute of Architects
- Australian Parents for Climate Action
- Australian Pipeline Limited
- Australian Pipelines and Gas Association (APGA)
- Australian Steel Institute
- Australian Sustainable Built Environment Council (ASBEC)
- Battery Storage and Grid Integration Program (BSGIP) at the Australian National University (ANU)
- Belconnen Alliance of Highrise Apartments (BAHA)
- CDC Data Centres
- Conservation Council, ACT Region
- Electrify Canberra
- Energy Efficiency Council
- Engineers Australia
- ESBS Consulting
- Evoenergy
- Green Building Council Australia (GBCA)
- Harvest Hot Water
- Jemena Limited
- Master Electricians Australia (MEA)
- Master Builders Australia (MBA)
- National Electrical and Communications Association (NECA)
- Northrop Consulting Engineers
- Pearcey Foundation
- Property Council of Australia
- School of Engineering, Australian National University
- St Vincent de Paul Society
- SwitchDin
- UP4323 St Germain Apartments
- UP11792 Apartments

Key insights from the community

General sentiment about the Integrated Energy Plan (IEP)

1. There was mixed support for the ACT's plans to electrify.
2. The majority of submissions from organisations were generally supportive of the IEP, highlighting the benefits of transitioning to renewable electricity. There was broad support for the principles of the IEP. Stakeholders recognised that the IEP focus areas were thorough in outlining many of the key challenges of implementation including ensuring reliability of the network, complex buildings, workforce, upfront costs for community and business and ensuring equity through the transition.
3. A few submissions from organisations were not supportive of the IEP. They said that the IEP was over-reliant on electricity produced from renewables such as wind and solar and suggested a more diverse energy mix.
4. There was a mixture of support and non-support from individuals that made a submission. Supporters highlighted the benefits of transitioning to renewable electricity, suggested that the timeline was realistic and reinforced the importance of focusing on equity and fairness in the transition. Those that did not support the IEP were sceptical about the reliability of renewable energy and focused on cost and freedom of choice for consumers.
5. The majority of workshop and focus group participants were very supportive of the transition, however this was contrasted by 55% of survey respondents who were either very or somewhat unsupportive of the ACT's intention to transition to a 100% renewable energy supply.
6. Across engagement activities, there was strong support for prioritising a fair and equitable transition to net-zero. Participants highlighted the importance of keeping community benefit at the centre of the transition. Participants also strongly supported the idea of energy independence and resilience. This included households becoming self-sufficient power hubs through solar panels and battery storage.
7. Key concerns raised included whether the electricity network has the capacity to support the increased demand, complexity and costs associated with upgrading existing infrastructure, the upfront costs to households and small businesses, and equity and accessibility for vulnerable households.
8. Most participants agreed on the environmental benefits of transitioning away from fossil fuels to 100% renewable energy. However, several participants also raised concerns about the recycling/end-of-life options for batteries and other renewable energy systems. This included the potential environmental impact of this.
9. The transition was also viewed by many as a significant economic opportunity, including in relation to creating new jobs, especially in the renewable energy sector.
10. Survey respondents were nearly evenly split in believing that delivering the IEP in three stages is the best way to electrify the ACT—41.7% believed it was, while 37.2% believed it was not. Notably, one-fifth were not sure.

Integrated Energy Plan: Principles

11. Overall, participants were supportive of the IEP's principles and emphasised the importance of upholding all principles.
12. However, participants noted that some of the principles were too complex and/or are trying to address to many issues. It was suggested that the principles could be refined and simplified. This was particularly in relation to Principle 2 - Provide a clear and implementable pathway to achieve and maintain net zero emissions.

13. Participants in workshops and focus groups reported the two most important principles were Principle 2 - Provide a clear and implementable pathway to achieve and maintain net zero emissions and Principle 3 – Prioritise a fair and equitable transition to net zero.
14. This was reflected in survey results, which in addition highlighted Principle 5 – Provide policy certainty so industry and community investments are made in the right areas at the right time in the top three most important. Survey responses indicated positiveassociations across all guiding principles, suggesting people who believe that one principle is important tend to believe that others are as well.

Focus area 1: Developing our future energy network and sharing the costs

15. Across engagement activities, there were mixed preferences for a consumer-led versus a staged transition approach. Some favoured a consumer-led transition for those who can afford it, with the main reason that this would allow consumers time to make informed decisions and avoid wasting current gas appliances by allowing them to reach their natural end of life. Others emphasised that a staged approach could provide greater choice, control and predictability, in relation to costs to individuals and business, and would allow time to build the skilled workforce needed for the transition.
16. About 40% of survey respondents believed a combination of consumer-led and staged-transition approaches would be best to support the energy transition away from fossil fuel gas and toward electricity. There was an even split that preferred either a consumer-led (22.9%) or staged-transition (21.0%) approach.
17. Across all activities, the most commonly reported barriers to uptake of consumer energy resources and other technology such as batteries, solar panels, and electric vehicles were:
    a. the cost of individual expenses for appliances and installation, as well as passed on costs of network upgrades
    b. perceived electricity network capacity/resilience
    c. lack of information and knowledge
    d. structural, admninistration and regulatory hurdles for apartments and other complex buildings
    e. renters and vulnerable members of the community having limited choice and control
    f. concerns about the environmental cost of manufacturing, recycling and disposing of consumer energy resources, particularly batteries and electric vehicles
    g. scepticism about changing to new technologies, citing concerns about reliability, future policy shifts, and the potential return to previous energy sources like gas.

Focus area 2: Electrifying our community

18. There was a strong view across engagement activities that cost/affordability is the biggest barrier to transitioning for households in the ACT. It was felt that this was particularly true for low-income households, however participants also raised the rising cost of living pressures on middle-income households as a barrier. There was a sentiment that there are a growing number of households that cannot afford to transition, yet don't qualify for existing subsidies, rebates and incentives.
19. Improved and increased financial incentives were suggested by many people as key to encouraging electrification in the community. Common suggestions were to expand current rebates and loan eligibility, offering loan repayments through rates and increasing the amount of financial support available. It was noted by several stakeholders that any incentive schemes should be closely monitored and regulated.

20. The need for further regulation to ensure landlords are responsible for making rental properties liveable and energy-efficient was raised by some.
21. There was strong support for the role of information and education in further encouraging electrification among households that have the means to do so. Providing clear information from reputable sources about electrification and the transition is important, and the use of case studies, graphics and plain language to demonstrate options and benefits was suggested by many.
22. Most survey respondents (76.4%) believe retailers should have to give people information about the ACT's electrification pathway when selling gas and electric appliances. 80.3% believe real estate agents should have to disclose existing gas connections, and appliances in use, when selling or leasing a property.
23. Most participants agreed that members of the community most likely to be negatively impacted during the transition include older people and people with disability, who may have less access to information, support and funds to make such a change; renters who can't make independent decisions about their energy source; and people from culturally and linguistically diverse backgrounds who may have issues accessing information.

Focus area 3: Electrifying complex buildings

24. Across engagement activities, participants identified a significant number of technical and administrative barriers associated with electrifying complex buildings.
25. The cost of transitioning complex buildings was of considerable concern among many stakeholders. The question of who pays for retrofitting or switching to electric alternatives, and how it would be paid for, was often raised. Several stakeholders also raised the question of how much, noting the difficulty providing a view on who pays and how when the actual cost is unknown.
26. Issues of inequity were highlighted where residents are required to pay or contribute the cost of transitioning. There was a prominent view that the mix of owner-occupiers, investors, renters, and individuals from various income brackets in complex buidlings can result in administrative barriers, such as differing priorities, capacity to contribute financially and investment interests.
27. Additional complexity in mixed-use buildings was also highlighted, with energy use, motivations for switching and costs/impacts differing between residential and commercial residents/tenants.
28. In relation to financial incentives, there was a strong view that there is a significant lack of rebates or subsidies available to apartments and townhouses (when compared to those available for free-standing homes).
29. Structural complexities were also raised, in particular with some apartment buildings and townhouses not being suitable or equipped for the required installations or infrastructure changes.
30. Many stakeholders raised the important role of strata managers and executive committees in managing decisions and budgets associated with transitioning complex buildings away from gas. However, many also noted this was difficult without access or knowldege about where to go for the necessary technical expertise or advice.
31. Participants suggested pilot projects, improved guidelines and regulation and financial incentives to address some of the barriers to electrifying complex buildings.
32. During this period, a stakeholder workshop focused on complex buildings was held on 8 September and also included an extended session seeking feedback on the program design for ACT Government's new Solar for Multi-unit Developments program. While this program is not included in the scope of the IEP consultation, the workshops were aligned to consider broader electrification of multi-unit development messaging and time constraints of our stakeholders.

Focus area 4: Electrifying business

33. Across engagement activities, participants highlighted that the transition for each small to medium business will look different. For some it will be relatively easy, for others it will be a burden financially and operationally, and this needs to be taken into consideration for transition timeframes and financial support.
34. Most participants identified cost as the main barrier to businesses electrifying. This included:
    a. cost of interruption to business during transition
    b. electric appliances taking more space than existing gas appliances, having potential fit-out cost implications, as well as costs for rewiring and upgrading switchboards
    c. impacts on business cash flow, service times and capital costs to transition commercial cooking businesses away from gas appliances
    d. concern over ongoing maintenance costs for high-use appliances.
35. In response to the survey, demand on existing electricity connections (21.4%), difficulty accessing EV charging infrastructure for commercial vehicles (21.4%), and the money and physical space required for new equipment and appliances (17.9%) were the most frequently cited challenges.
36. Many participants raised that many businesses lease their premises and the decision to transition may not be within their control. It was suggested that there is a need for clear guidelines about who pays and who benefits.
37. Several participants raised the risk of businesses relocating to surrounding geographical areas/not establishing in the ACT if transitioning becomes too difficult or expensive. In this context, participants also highlighted the importance of collaboration with nearby towns and cities.
38. Across activities, participants most commonly suggested financial incentives, tax breaks, regulatory measures and clear communication as ways government could support businesses with electrification.

Focus area 5: Electrifying industry and heavy transport

39. Commercial and industrial gas users had mixed opinions on the plan to transition away from fossil-fuel gas. Some businesses felt that this was necessary, while others felt that it was too aggressive.
40. Some businesses were more mature in their thinking about the transition and what considerations may be relevant to their transition than others e.g., available technology, investment in rewiring.
41. Many businesses who require specialised technology (e.g. for industrial processes), and use large amounts of gas, generally had a low-level understanding of alternative renewable energy powered technologies. Those that did understand them did not believe that they would be a viable option for decarbonisation by 2045 due to supply constraints.
42. Businesses also raised concerns about the availability of suitable alternative renewable energy appliances, the electrical infrastructure at individual business sites, and the availability of skilled labour to accelerate the transition.
43. Businesses were very focused on the financial aspects of the transition and of long-term energy operating cost profiles. This was typically noted as the main enabler or barrier to speeding up their transition off fossil fuel gas.
44. It was also highlighted that businesses, particularly small operators, and truck owners, may face financial difficulties transitioning their current assets, such as high-value trucks, to low-pollution alternatives. Addressing the issue of outdated assets and the potential financial burden on small businesses requires careful consideration.
45. Many stakeholders emphasised the risk of losing particular industries that have niche gas uses to NSW, and that government will need to develop and implement strategies to prevent this for economic stability and growth.

46. Network capacity was also raised by some stakeholders, with a concern that the impact on the network of a full industry transition needs to be assessed to prevent infrastructure strain.

Focus area 6: Skills and workforce for the transition

47. The shortage of skilled tradespeople, particularly in gas and electrical trades, was raised across most engagement activities. Participants emphasised education, skill development and workforce readiness will need to be a priority to realise the opportunities of the transition.
48. Some participants also expressed concerns around creating a premature shortage of gas-fitters, who will still be needed to manage the decommissioning of gas connections and appliances.
49. There was strong agreement that upskilling the existing workforce to align with the impacts of the transition on trades needs to be a priority. Concerns were raised about potential job losses if tradespeople aren't provided with opportunities to transition their skills. The time and cost require to do this was also raised, with some stakeholders suggesting increased training subsidies and incentive to business to help combat this.
50. The importance of paying apprentices a living wage was highlighted by many, including increased wages for mature-aged apprentices. Current apprentice wages were seen by many as a barrier to both upskilling and re-skilling. Some felt this should be dealt with through legislation and recognition of interstate licenses.
51. Better awareness for school leavers about the trade pathway and advertising the benefits of learning a trade (including becoming an electrician) were suggested as ways to address the skills shortage.
52. To meet the demands of the transition, some participants emphasised that the ACT needs to attract more teachers and expand course offerings at institutions like CIT and other Registered Training Organisations.
53. There were mixed views about the 'cross-pollination' of skills between electricians and plumbers. Some stakeholders felt this would allow for an easier pathway to upskilling and provide a skilled workforce trained in multiple areas, however others raised concerns with the impact of de-specialisation on particular trade industries.

Indicators: Measuring the gas transition

54. Survey respondents commonly suggested monitoring increases in electricity demand and decreases in gas consumption, as well as uptake of solar panels, battery systems and EVs, to track transition progress.
55. Stakeholders suggested that key indicators of progress should combine measures of disconnection from the fossil fuel gas network and increase in the uptake of sustainable technologies in homes, businesses and in transport.
56. Additional indicators could include metrics like the emissions intensity of ACT electricity usage and the proportion of decision-makers using sustainable transport, to capture other aspects of the transition.
57. Potential barriers to achieving the proposed targets included a slow consumer-led approach, technological limitations, and data gaps that make it challenging to dynamically adjust targets.
58. Survey respondents suggested keeping the community informed about their collective progress, such as gas consumptions comparisons year over year, would help to support momentum.

WHAT'S NEXT?

Thank you to all who provided feedback on the Integrated Energy Plan and shared their ideas on how we can support an equitable and fair transition off fossil fuel energy. Your feedback will help us to develop the first Integrated Energy Plan, which is expected to be released in early 2024.

To find out more about the ACT's pathway to electrification project and start your energy transition, visit www.energy.act.gov.au

THANK YOU FOR YOUR FEEDBACK		
1,500 People visited the YourSay Conversations project page	**202** We spoke to over 200 individuals at workshops, webinars focus groups, in interviews and at the Industry Forum event	**17** ideas were shared on our comment walls
172 people, businesses and organisations, completed a survey	**37,378** We reached a social media audience of over 37,000	**52** We received 52 written submissions