



Budget 2019

Submission

Engineers Ireland's Budget 2019 Priorities

1. Implement Project Ireland 2040 investment commitments

- Implement the promised €1.5 billion increase in capital investment to €7.3 billion
- Achieve the 4% GNI* level of public capital investment as soon as practicable
- Ensure capital investment decisions are tied to the National Planning Framework
- Invest in the transition to a sustainable economy and society

2. Reform infrastructure policy, planning and delivery

- Convene a taskforce on infrastructure policy, planning and delivery reform
- Engage the UK National Infrastructure Commission and bodies in other jurisdictions
- Fund the establishment of a single infrastructure authority to develop a long-term vision and strategy, identify priority projects and explore innovative funding

3. Increase the supply of high-quality, connected housing

- Surpass the Rebuilding Ireland targets, emphasising new builds and renovations
- Reinforce building regulations and standards to deliver high-quality homes
- Put in place the supports needed for housing delivery, incl. technology and skills
- Advance the National Broadband Plan without delay, ensuring future-proofing

4. Build up safe and secure water and flooding systems

- Adequately fund Irish Water as the national publicly-owned water utility
- Resolve issues in untreated effluent discharges, network leakage and capacity
- Progress the Water Supply Project and Greater Dublin Drainage Project
- Strategically deliver the 118 flood relief schemes to protect 95% properties at risk

5. Incentivise professional skills and experience in STEM

- Incentivise the promotion of professional standards and education in engineering
- Restore tax treatment for professional subscriptions to 1997 Act provisions
- Expand funding for coordinated national outreach on STEM, particularly for women
- Increase funding to higher education, further education and R&D

2nd August 2018

Introduction

Engineers Ireland is the voice of the engineering profession, representing over 25,000 members from every discipline of engineering. This submission to Budget 2019 is underpinned by our core policy values:

- Advancing the safety, health and well-being of the public
- Promoting the principles and practices of sustainable development and the needs of present and future generations
- Leading rapid and transformational developments in digital and other technologies for the benefit of all
- Promoting knowledge and skills, professional standards, diversity, and public confidence in the engineering profession
- Acting with integrity, objectivity, evidence, authority, and transparency as an organisation

Our Budget 2019 recommendations are informed by consultations with our expert engineering members and partners from across Ireland. The recommendations draw on two of our recently-published landmark reports:

- The State of Ireland 2018, an independent assessment of our infrastructural needs in water, wastewater, flood risk management, energy, transport, communications and waste. The report is available at: <http://engineersireland.ie/communications/state-of-ireland-2018.aspx>
- Engineering 2018, a barometer of the profession in Ireland, which analyses trends in engineering employment, perspectives and education. The report is available at: <http://engineersireland.ie/communications/engineering-2018.aspx>

Over the next 20 years, our population is expected to increase by one million people. In line with international trends, we must prepare for the majority of this population and jobs growth to be focused in urban centres. This will mean putting in place strategic systems of infrastructure to support sustainable, compact and smart growth.

In the shorter term, greenhouse gas emissions and emerging shortages of capacity in several sectors have the potential to hamper environmental, social and economic progress. As the economy grows and as the need for climate action becomes all the more pressing, the Irish State must continue to plan, invest in and deliver infrastructure and services which meet the needs of its citizens both now and in the long-term.

Overall, we find that there needs to be a substantial increase in the allocation of capital investment in various forms of infrastructure to underpin economic growth, raise living standards more equitably and build a sustainable environment.

Earlier this year, the National Development Plan 2018-2027 and National Planning Framework were published as part of Project Ireland 2040. Engineers Ireland is very supportive of these plans, which represent a critically important framework for the sustainable development of Ireland over the next generation.

We welcome the 10-year pipeline of projects contained in the €116 billion National Development Plan, which should inspire confidence in the sector. In particular, we welcome the fact that many of these projects were identified by expert engineers as vital pieces of infrastructure and recommended in our submission to Budget 2018. These include:

- National Broadband Plan
- Flood risk management
- Metro Link, DART expansion and BusConnects
- M20 Cork to Limerick
- Airport and port upgrades
- Renewables and grid interconnection
- Retrofitting for energy efficiency
- Water and wastewater treatment and networks

We also find it very positive that a new funding model for Exchequer-funded public investment has been put in place to support the achievement of Project Ireland 2040 objectives, as noted in the *Summer Economic Statement (p29)*:

- Long-term (10 year) strategic approach, aligned with the National Planning Framework
- Sustained increases in public capital investment
- Greater certainty provided by the setting out of 10 year Exchequer Gross Voted Capital Ceilings and rolling 5 year Departmental ceilings
- Departments' capital programmes are now fully funded for a 5-year period
- Strategic Investment Priorities identified by Departments are funded beyond this 5 year period, to their completion or to 2027 if funding for more than 10 years is involved
- Four funds totalling €4 billion targeting urban and rural renewal, climate action and 'disruptive technologies'

For these reasons, Engineers Ireland's submission to Budget 2019 focuses on the delivery of Project Ireland 2040. In the pages which follow, we set out proposals for overcoming some of the challenges facing Project Ireland 2040 and for achieving value-for-money and maximum social and environmental benefit from these projects.

1. Implement Project Ireland 2040 investment commitments

Engineers Ireland's recommendations

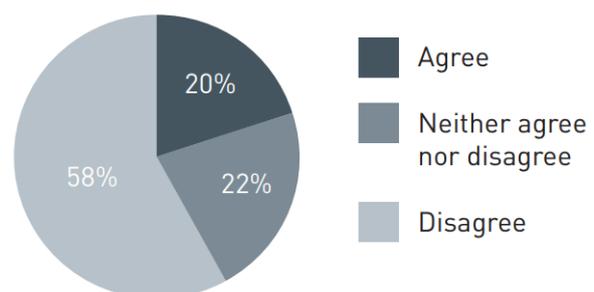
- Implement the promised €1.5 billion increase in capital investment to €7.3 billion
- Achieve the 4% GNI* level of public capital investment as soon as practicable
- Ensure capital investment decisions are tied to the National Planning Framework
- Invest in the transition to a sustainable economy and society

High-quality infrastructure is an important element of a modern society and economy. It strengthens economic growth through enhancing efficiency, productivity and competitiveness. Infrastructure also underpins social cohesion through providing vital facilities for citizens, such as public transport and broadband, and helps to prepare us for future challenges such as climate change and Brexit.

As the professional body for engineers, Engineers Ireland awards the registered professional title of Chartered Engineer, the badge of excellence in engineering. Earlier this year, we asked 1,000 of our Chartered Engineers to assess the current state of Ireland's infrastructure. 58% said that Ireland's infrastructure is not in good condition and does not have capacity for future development. Meanwhile, just 20% of the Chartered Engineers said that Ireland's infrastructure is in good condition with capacity for future development.

Ireland's infrastructure is in good condition with capacity for future development

n = 1,000 Chartered Engineers



Capital investment fell dramatically during the recession and there are now serious infrastructural deficits in many sectors. Engineers Ireland strongly supports increased capital investment as part of a sustainable approach to enhance the recent economic recovery and meet the needs of a growing society.

As an absolute priority, Budget 2019 must include the €1.5 billion increase in Exchequer capital expenditure from €5.8 billion to €7.3 billion as committed in Project Ireland 2040. Once non-Exchequer sources of capital expenditure are included, this increase would bring capital investment to €10 billion or 3.5% GNI* in 2019 (see Figure 1).

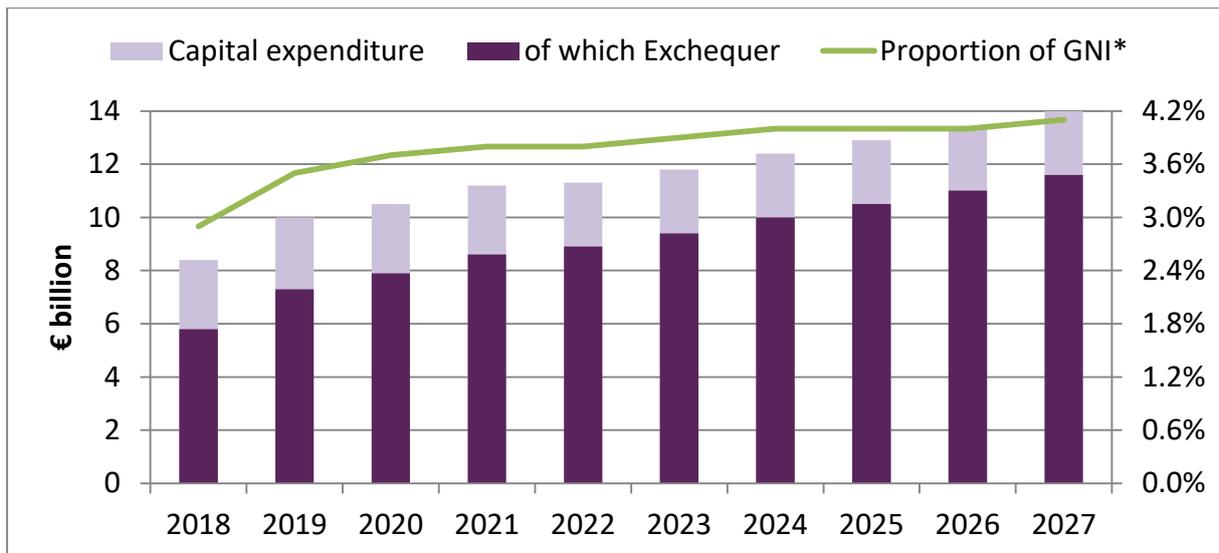


Figure 1. Ireland's planned public capital investment (National Development Plan 2018-2027)

Beyond 2019, it is critical that planned public capital investment levels are achieved, at a minimum. This will require increases of Exchequer capital expenditure of €600 million in 2020 and €700 million in 2021 (representing 3.8% GNI*). This rate of capital expenditure increase must keep pace with economic growth such that the position of 4% GNI* is reached as soon as is practicable – 2024 at the latest.

An integrated and long-term approach is needed in capital investment to ensure value for money and sustainable outcomes and, to this end, reform will be required in infrastructure policy, planning and delivery reform (see Section 2). It is particularly important that capital investment decisions are tied to the National Planning Framework. For example, investment should support the smart and compact growth of Ireland's regional cities (such as supporting housing development, see Section 3) while providing vital services, such as broadband, for rural areas.

In their Annual Report 2018, the Climate Change Advisory Council has highlighted the urgency of action to achieve progress in the transition to a low-carbon, climate-resilient and sustainable economy and society. Ireland's greenhouse gas emissions are currently rising rather than falling and projections to 2035 paint a startling picture. Project Ireland 2040 sets out welcome projects to enable the transition, however, close monitoring and evaluation is required.

Similarly, the National Mitigation Plan highlighted the need for expanded funding in infrastructure to enable the transition to a low-carbon society. The Plan outlines 106 policy measures to reduce greenhouse gas emissions and transition to a low-carbon society by 2050. These measures should be implemented as part of wide-ranging and ambitious climate action. In this context, Section 4 includes proposals for the challenging sectors of water, wastewater and flooding.

2. Reform infrastructure policy, planning and delivery

Engineers Ireland's recommendations

- Convene a taskforce on infrastructure policy, planning and delivery reform
- Engage the UK National Infrastructure Commission and bodies in other jurisdictions
- Fund the establishment of a single infrastructure authority to develop a long-term vision and strategy, identify priority projects and explore innovative funding

While progress has been made in recent years, there are still some frustrating delays with infrastructure. Planning and delivery of our infrastructure is currently spread across many Government departments and agencies, each competing for limited resources. To achieve integrated policy objectives and efficiently deliver Project Ireland 2040, it will be necessary to reform in the way we plan and deliver infrastructure projects.

Engineers Ireland recommends that Government reform infrastructure policy to enable an integrated and long-term approach, embracing fresh ideas in collaboration with external experts. We believe that a single infrastructure authority should be established to coordinate the institutions and policy instruments which are currently involved in infrastructure planning and delivery.

This authority would work collaboratively with external experts (such as engineers, planners, economists etc.) to develop a long-term vision and strategy, identify priority projects, and explore innovative financing and funding mechanisms. The authority should learn from the experience of the UK and other countries, which have built collaborative relationships with a network of expert stakeholders while placing significant emphasis on its links with political actors, engaging existing policy and building high-level consensus.

The authority would support the determination and implementation of best-practice in infrastructure project management in key areas such as transport, education, health, energy and the digital economy. It would seek to build cross-party and cross-sectoral consensus, as well as media and public understanding and support, on infrastructure under a range of possible futures. This approach would greatly assist in the achievement of the strategic outcomes in Project Ireland 2040 and the National Mitigation Plan.

A taskforce should be established to explore these and other proposals for infrastructure policy, planning and delivery, and funding for institutional reform should be made available. This taskforce should work closely with recently-initiated bodies such as the Construction Sector Group to bring together a wide range of industry stakeholders.

3. Increase the supply of high-quality, connected housing

Engineers Ireland's recommendations

- Surpass the Rebuilding Ireland targets, emphasising new builds and renovations
- Reinforce building regulations and standards to deliver high-quality homes
- Put in place the supports needed for housing delivery, incl. technology and skills
- Advance the National Broadband Plan without delay, ensuring future-proofing

Housing and homelessness is one of the greatest challenges faced by our society. In our survey of 1,000 Chartered Engineers, the housing system received a 'D' grade meaning unable to meet demand and requiring immediate investment to avoid adverse impact on the national economy. Moreover, our professional engineering membership told us that 'increasing housing supply' is their number one election issue.

While housing completions have greatly improved in recent years (three-fold increase in the past five years), this level is still far below the estimated level of housing demand based on demographic trends (approximately 35,000 dwellings required per year). Rebuilding Ireland established ambitious targets for house completions; it is essential that these targets are surpassed, emphasising new builds and bringing vacant houses back into productive use.

New developments and the renovations of existing buildings must yield high-quality homes; the current housing crisis must not lead to any dilution of building regulations. Strong standards are required for safe, energy-efficient, accessible and future-proofed homes. Progress made through the introduction of the Building Control (Amendment) Regulations 2014 could be reinforced by removing the opt-out for one-off dwellings and by increasing the resources of local authorities for inspection and enforcement.

Sustainably increasing housing supply requires a wide range of supports, including infrastructure, technology and skills. For example, water supply, wastewater and energy, public transport, roads, broadband, are all needed to meet the additional demand generated by new housing developments. However, there are critical shortages of engineers and other construction professionals (see Section 5). Meanwhile, developments in digitalisation (such as Building Information Modelling) can offer major benefits in productivity and efficiency.

Finally, the delivery of the National Broadband Plan is pivotal for housing development and access to basic services in many of Ireland's towns and villages. The contract must be finalised without any further delays to ensure Ireland does not fall behind when attracting new overseas business and supporting the establishment of domestic enterprise.

4. Build up safe and secure water and flooding systems

Engineers Ireland's recommendations

- Adequately fund Irish Water as the national publicly-owned water utility
- Resolve issues in untreated effluent discharges, network leakage and capacity
- Progress the Water Supply Project and Greater Dublin Drainage Project
- Strategically deliver the 118 flood relief schemes to protect 95% properties at risk

The State of Ireland 2018 assessment focused on water / wastewater and flooding infrastructure. Two expert advisory panels, comprising representatives from Government departments, State agencies, academia and private industry graded these sectors and developed two-year and five-year priority actions (see Appendix). Both sectors received a 'C' grade, meaning that these sectors of infrastructure are inadequately maintained, unable to meet peak demand and require significant investment.

Through the Water Services Act and Water Services Policy Statement 2018-2025, Irish Water is secured as the national publicly-owned water utility. Government must now ensure that adequate, multi-annual funding is made available to achieve the objectives identified in the organisation's Business Plan to 2021 and Investment Plan 2020 to 2024 (which is currently in development). For example, the National Development Plan estimates that €14 billion will be required by Irish Water over the period 2018 to the mid-2030s.

For water / wastewater, our recommended actions include reducing leakage from the water mains network from 44% to 35%, eliminating the discharge of untreated effluent, upgrading existing infrastructure such as water supply at Vartry (Wicklow), water treatment at Lee Road (Cork) and wastewater treatment at Ringsend (Dublin) and Cork Lower Harbour.

Recent water shortages have demonstrated the extreme pressure on water supply capacity in Dublin. In line with Project Ireland 2040, strategic projects must be progressed to support the growth of Dublin and the wider region, including the Eastern & Midlands Region Water Supply Project and the Greater Dublin Drainage Project.

In the flooding area, Engineers Ireland calls for excellent and maintained flood defences and warning systems and sustainable land-use practices. A strategic plan should be developed for the efficient delivery of the 118 schemes identified in Flood Risk Management Plans (Flood Plans) and smaller schemes, drawing on international best practice. This would protect 95% of the properties found to be at high risk of flooding. Particular attention should be paid to measuring and designing for the effects of climate change.

5. Incentivise professional skills and experience in STEM

Engineers Ireland's recommendations

- Incentivise the promotion of professional standards and education in engineering
- Restore tax treatment for professional subscriptions to 1997 Act provisions
- Expand funding for coordinated national outreach on STEM, particularly for women
- Increase funding to higher education, further education and R&D

Highly competent engineers will be particularly crucial for the delivery of Project Ireland 2040. As the professional body for all disciplines of engineering, Engineers Ireland ensures that engineers are properly qualified, competent and maintain professional standards. However, recent Revenue guidance has restricted the qualification of professional subscriptions for BIK exemption, thereby disincentivising investment in and promotion of professional education and standards.

In the best interests of the development and standards of engineering and other professions, we believe the tax treatment for professional subscriptions as previously provided for under the Taxes Consolidation Act 1997 be restored. See [‘Building Ireland’s Future: The Role of the Professions’](#) for more information.

Science, Technology, Engineering, and Maths (STEM) are vital to addressing global challenges, such as climate change, and to informing public decision-making in our democracy. Increased STEM graduate numbers are urgently required in the recovering economy. A shortage of Civil & Building engineers (graduates of which are down 45% in the last five years) is already undermining our potential to deliver Project Ireland 2040.

To increase the number of students opting for STEM courses, funding for evidence-based and coordinated national outreach on STEM should be expanded and additional partnerships should be encouraged. Particular attention should be paid to encouraging young women to study STEM and more dedicated initiatives and supports should be put in place at all levels.

We note with great concern that core funding per student at higher level has decreased substantially in recent years – this has had a detrimental impact. In some institutions, laboratory equipment and facilities have become almost obsolete. Not being able to expose students to experiments using world-class equipment hampers the ability of our higher education institutions to be considered attractive to students and globally competitive. Furthermore, research and development in higher education, private industry, and partnerships between the two should be incentivised.

Appendix: The State of Ireland 2018 Recommendations

Water / Wastewater

Two year recommended actions:

- Improve the protection of human and environmental health by providing groundwater and surface water Source Protection Plans for all viable supplies and upgrade well heads and abstraction points where deficiencies are immediately apparent.
- Undertake Drinking Water Safety Plan risk assessments and implement mitigation measures to address all high and very high risk hazardous events identified in Drinking Water Safety Plans to protect public health.
- Carry out the identified upgrades on private Group Water Scheme (GWS) treatment facilities listed on the GWS Remedial Action List.
- Complete an extensive review of the GWS sector to devise a rationalisation and amalgamation programme to form more sustainable water supplies.
- Reduce network leakage from 44% to 40% (saving the equivalent of 10,000 Olympic-sized swimming pools of water per year) by scaling up investment in active leakage control, supported by water mains rehabilitation and replacement.
- Upgrade existing key strategic infrastructure such as water supply at Vartry (Wicklow), water treatment at Lee Road (Cork) and wastewater treatment at Ringsend (Dublin) and Cork Lower Harbour.
- Plan for sustainable growth in accordance with the National Planning Framework and Regional Spatial & Economic Strategies. Progress projects such as the Eastern & Midlands Water Supply and the Greater Dublin Drainage Project.
- Target investment at the elimination of all untreated wastewater discharges and achieving compliance with the EU Urban Wastewater Treatment Directive.
- Review the operation of new and existing domestic water supplies and wastewater treatment.
- Incentivise a major expansion of desludging of domestic wastewater treatment systems and plan for the management of sludge generated.
- Launch a Sustainability Education Programme on the water cycle, water quality and the value of water, targeting in particular domestic water and wastewater systems.
- Expand research and application of sustainable water resource management.
- Improve cross-sectoral communication on the implementation of existing water management with a longer-term vision of implementing innovative solutions to challenges such as leakage control, hydraulic performance and water quality.

Five year recommended actions:

- Fully assess the environmental sustainability of existing abstractions in the context of likely future water demand and adopt a sustainable approach to water abstraction by, for example, amalgamating inefficient water supply schemes into more appropriately located and efficient schemes.
- Implement a rationalisation and amalgamation programme for the GWS sector focusing on small private supplies with less than 100 domestic connections.
- Develop and implement Source Protection Plans for all GWS private supplies.
- Achieve significant milestones in working towards a safe and secure drinking water supply for the entire country through the implementation of mitigation measures identified in Source Protection and Drinking Water Safety Plans.
- Implement effective land use management plans within catchment areas to mitigate the risks of contamination occurring, which should dovetail and be in conjunction with the work to achieve EU Water Framework Directive compliance.
- Further reduce network leakage to 35% (saving the equivalent of a further 12,000 Olympic-sized swimming pools of water per year) as part of a roadmap to resource efficiency.
- Achieve and maintain compliance with the EU Urban Wastewater Treatment Directive and EU Drinking Water Directive.
- Start construction on the Eastern & Midlands Water Supply Project, the Greater Dublin Drainage Project and other projects to ensure water and wastewater capacity in all major towns and cities.
- Implement the recommendations of the review of domestic water supplies and wastewater treatment with a view to transferring knowledge, ownership and accountability of clean water supplies and non-polluting wastewater treatment systems on the domestic user.

Flooding

Two year recommended actions:

- Develop a strategic plan for the efficient delivery of schemes identified in Flood Risk Management Plans (Flood Plans) and smaller schemes, drawing on international best practice and including the following key components:
 - Multi-annual budgeting for the implementation of Flood Plans and a programme of proactive maintenance of existing structures and associated waterways;
 - A multi-stakeholder taskforce to review the operation of legislation and policy governing flood risk management;
 - Standard methodologies for the translation of current knowledge on climate change into design guidance for resilient infrastructure;
 - A public engagement campaign on flooding causes and the full array of hard and soft risk management options, including nature-based water retention options and managed retreat. Showcase the functioning of completed flood risk projects.
- Maintain and extend the network of permanent measurement facilities (e.g. automatic rain gauges, rainfall radar, water level monitoring, satellite / remote measurement and continuous GPS).
- Expedite the development of flood forecasting capability for larger catchments and more populated bays around Ireland. Pilot linkages of forecasts and warnings.
- Prevent escalation of assets at risk from flooding, including coastal, especially through the implementation of the National Planning Framework, Regional Spatial & Economic Strategies and local authority development plans, in accordance with flood risk management planning guidelines.
- Provide national guidance and put in place an overarching framework which allows different organisations to work together and to develop the most suitable solutions to surface water flooding problems under a coordinated plan (surface water management plan).
- Compile an inventory of groundwater flood events and establish a framework for describing groundwater flooding extent, severity and frequency and calculating associated return periods.
- Compile a register of all significant dams in Ireland.

Five year recommended actions:

- Act on the outcomes of the proposed review of legislation and policy governing flood risk management. Consider whether a dedicated authority with statutory powers be established to manage flood risk, pollution and land management at a catchment scale.
- Roll out the strategic programme of Flood Plan projects in a phased and coordinated way that will encourage the organisations involved to upscale their capacity to construct and deliver these projects.
- Continue the development of the National Flood Forecasting and Warning Service and improve local warning systems to assist emergency response.
- Progress the national Integrated Coastal Management Plan and pilot environmentally sustainable and economically feasible projects such as sand engines and sand dune generation to break up wave actions.
- Consider wider flood risk, e.g. rural flooding and coordinated catchment-based opportunities for flood risk management as part of future cycles of the EU Floods Directive.
- Undertake research and establish appropriate design standards for flooding infrastructure with multiple benefits, e.g. integrating with water quality and environment-supporting conditions.
- Enhance permanent measurement and monitoring facilities as well as comprehensive data systems and analysis to reduce uncertainties in quantifying flood risks.
- Develop a national database of flood risk management facilities to enable the protection of critical infrastructure, e.g. hospitals, power stations and wastewater treatment plants.
- Develop and implement a system of assessment for multi-functional dams in Ireland.

Energy

Recommended actions:

- Implement the National Mitigation Plan as a step towards achieving a low carbon, carbon resilient and sustainable economy.
- Progress the North–South Interconnector to further bolster security of supply and reduce cost to the consumer, as well as exploring other interconnection options with a view to developing them if and when appropriate.
- The Government should lead by example, with Ministers encouraged to replace their existing fossil fuel-powered cars with hybrids or electric vehicles (EVs).
- Review and revise energy policy every three to five years and inform the process with reports on progress made, gaps to target and new technological developments.
- Maintain investment in the transmission and distribution networks to meet the needs of a growing economy and the transition from fossil fuels to renewables.
- Explore technology solutions such as energy storage and further interconnection to address variable renewable generation.
- Encourage renewable energy in Ireland and harness Ireland’s already identified naturally occurring renewable resources.
- Carry out a deep retrofit of Ireland’s domestic dwellings and public buildings to reduce energy demand and increase energy efficiency.
- Convert the 900,000 homes that are not connected to the gas network and which use solid fuel or oil for heat to an appropriate electric heating solution.
- Incentivise the production of biogas from anaerobic digestion plants to enable 20% of natural gas be displaced by biogas from the gas distribution system.
- Encourage industrial locations which are off the natural gas network to implement biomass solutions for their thermal (heating/cooling) requirements.
- Continue to build out the necessary charging infrastructure to keep pace with EV adoption, including superfast chargers on inter-urban routes.
- Ensure public transport is more accountable in delivering renewable energy sources in transport (RES-T) and carbon emission targets.

Transport

Recommended actions:

- Increase the allocation of capital investment in transport infrastructure to ensure that there are adequate funds for both the maintenance of existing assets and new build projects.
- Accelerate the purchase of EVs by Irish consumers through further soft incentives such as the use of bus corridors for electric vehicles, revisiting the registration tax and exploring other financial incentives.
- Reuse, recycle and repurpose existing transport assets, such as converting existing roads into specific bus, cycle and car sharing lanes.
- Update Ireland's national aviation policy to optimise the State airports for both passenger and freight purposes.
- Progress the planning and delivery of MetroLink.
- Introduce variable speed limits and multi-point tolling on the M50 to avoid an impending congestion crisis in the short-term.
- Progress the planning and delivery of the M20 Cork to Limerick motorway.
- Bring forward construction on the planned N4, N5, N25/M8, N22 and N28 road projects.
- Develop bus priority routes, core bus corridors and bus rapid transit routes for high frequency bus transfers in each of the five major urban centres.
- Introduce public transport systems that utilise sustainable energy sources, such as hybrid, electric, compressed natural gas (CNG) and liquid natural gas (LNG).
- Plan for the electrification of the heavy rail network and progress essential works in preparation for the DART Expansion Programme.
- Begin planning for the Eastern Bypass to alleviate congestion on the M50.
- Improve connectivity of the north-west and the Atlantic Corridor to Ireland's seaports.
- Publish the Rosslare Europort Masterplan.
- Introduce an adequately funded proactive planned programme of essential renewals for Ireland's heavy rail network.
- Expand the heavy rail fleet capacity to meet the demands of a growing economy and population.
- Increase the longevity of route permissions beyond Environment Impact Statements to secure route corridors.
- Incentivise car sharing clubs and educate young people on the advantages of these approaches to discourage multicar households and on-street urban parking.
- Extend the Luas lines and provisions for Park & Ride to encourage more commuters to leave their cars at home and take public transport to work.
- Build out the CNG network as proposed.

Communications

Recommended actions:

- New building developments should include provision for infrastructure to support broadband rollout, for example, ducting for easier access to homes and businesses.
- Award the contract for the National Broadband Plan (NBP) without delay and with expedited timelines for delivery.
- Support the development and deployment of farm-based applications and digital services, the 'Internet of Farm', to ensure the prosperity of the rural agri sector.
- Continue the intensive negotiations on Brexit-related issues, including agreeing a strategy to manage data post-Brexit.
- Continue to develop the capacity of the National Cyber Security Centre and further engage with national and international stakeholders around proactively securing systems and responding to incidents.
- Continue to reduce service costs when rates/speeds are not equal in rural/urban areas.
- Continue to address any barriers to commercial deployment of broadband and mobile infrastructure and ease the full build and rollout of the network planned under the NBP.
- Continue to research and develop the network in anticipation of 5G services.
- Future proof the network to ensure it is scalable and complies with any revisions to the EU broadband speed targets.

Waste

Recommended actions:

- Continue the roll-out of the organic waste collection system to households and businesses and increase indigenous treatment capacity for this stream.
- Additional treatment capacity (lined and unlined) is needed for the management of soil wastes. The lifetime limit for permitted facilities should be increased to help support secure and viable operations of this scale.
- Ensure the necessary policy environment and infrastructure is put in place to deliver the prevention and recycling targets as set out in the regional waste management plans and EU Circular Economy Action Plan.
- Compile and publish a live register of waste treatment facilities to support the roll-out of future investment.
- Prioritise the development of indigenous waste treatment facilities including anaerobic digestion and biological treatment capacity, lined soil recovery capacity, mechanical processing capacity to produce quality recyclables and additional thermal recovery capacity for hazardous and non-hazardous wastes.
- Review the need for establishing contingency landfill capacity to prevent serious waste-related events that threaten the health of citizens and our environment.

With over 25,000 members from every discipline of engineering, Engineers Ireland is the voice of the engineering profession in Ireland. Engineers Ireland was established in 1835 making us one of the oldest and largest professional bodies in the country. Members come from every discipline of engineering, and range from engineering students to fellows of the profession.

Our responsibility is to

- **Promote knowledge of engineering**
- **Establish and maintain standards of professional engineering and engineering education**
- **Provide opportunities for Continuing Professional Development (CPD)**
- **Maintain standards of professional ethics and conduct**
- **Ensure that professional titles are granted to qualified candidates**
- **Act as the authoritative voice of the engineering profession in Ireland**

Our Vision

A community of creative professionals delivering solutions for society.

Our Mission

Engineers Ireland is an organisation that enables the engineering community to progress their professional development, make an impact on society and encourage and educate the future generations of engineers.

