

Overview of the Main Infrastructure Issues for Enterprise

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Forfás prepares these briefing notes on recent important developments and key enterprise issues in each of the main infrastructure areas. They are updated on a six monthly basis.

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Energy

Background

Promoting energy production and consumption patterns that are environmentally sustainable, economically competitive and secure is a challenge that has moved to the top of the political agenda across the globe and is central to any discussion of national competitiveness. Ireland's ability to continue attracting high levels of foreign direct investment and to provide a supportive environment for Irish industry generally will depend on its capacity to deliver a secure and sustainable energy supply at a competitive cost.

Recent Developments

- The Commission for Energy Regulation (CER) has announced electricity price reductions of 4.4 percent for small business customers and 8.4 percent for medium business customers, effective from the 1st November 2007¹. The CER no longer regulates large energy users' tariffs on the grounds that this sector is sufficiently competitive to warrant the removal of regulation. Evidence to date suggests that prices for large energy users will remain flat. The CER has announced a reduction of 10.6 percent in gas prices for domestic, smaller industrial and commercial customers, effective from the 1st of October 2007. This follows a 10 percent reduction in gas prices from 1st February 2007.
- Following on from the publication of the Energy Green Paper in October 2006, an Energy White Paper was published in March 2007. This sets out the energy policy framework to 2020 to deliver a secure, sustainable and competitive energy future for Ireland. Among the main actions proposed include the full ownership unbundling of the electricity transmission grid network, the development of a State-owned landbank to facilitate competition, a 33 percent target for renewable electricity generation by 2020 and further potential investment to interconnect the Irish market to Northern Ireland, the UK and potentially continental Europe.
- Every four years, the International Energy Agency (IEA) undertakes an in-depth review of energy policies in member countries and the latest review of the Irish energy market was launched in July 2007. The IEA broadly endorsed the energy policy direction set out in the Government's Energy White Paper but stressed the need to focus on its implementation to address Ireland's significant energy weaknesses. Among the IEA's main priorities are reform of the electricity and gas markets; improving security of supply through greater diversity in the fuel-mix and the source of that fuel (particularly gas); improving energy efficiency; and developing renewable energy sources while being mindful of the cost implications of meeting the ambitious renewable targets.
- In January 2007, the European Commission unveiled a new EU Energy Package which centred on binding targets to cut the EU's greenhouse gas emissions by 20 percent in 2020 compared to 1990 levels. In September, the Commission published its plans for further reform of the gas and electricity markets to deliver a fully competitive internal market, including a proposal for the separation of the ownership and operation of transmission networks from generation/supply activities.
- Direct Exchequer investment in energy infrastructure did not form a significant part of previous National Development Plans (NDP) as it was funded directly by the semi-state companies involved from user charges. Energy has become a major component of NDP 2007-2013 with total investment proposed of €8.5 billion. Exchequer funding of €276 million is being provided for the development of sustainable energy projects, however, the majority of the investment proposed

¹ With regard to medium sized businesses, existing customers of ESB Customer Supply will see a higher average reduction in electricity prices as a consequence of a retrospective adjustment, primarily from an over-recovery of the tariff in the first ten months of 2007. For new customers, the reduction will be 2.3 percent.

involves the capital investment programmes of the semi-state companies. Most of that money will be spent on upgrading, renewing and expanding the existing gas and electricity transmission and distribution networks.

Key Issues

The availability of a reliable, competitively priced and sustainable supply of energy is essential for competitiveness. While there can be trade-offs between these three pillars, it is notable that Ireland currently faces challenges on all three:

1. **Cost Competitiveness:** Between 2002 and 2007, industrial electricity prices (excluding VAT but including other taxes) increased by 52 percent in Ireland. Prices have also increased internationally. Between 2002 and 2007, prices increased by 40 percent in the EU-15 and 46 percent in the UK.
2. **Security of Supply:** The margin between electricity generation and peak demand is narrow in Ireland. Furthermore, 90 percent of our energy needs are imported. Ireland is heavily dependent on imported fossil fuels for electricity generation with limited use of renewable resources.
3. **Sustainability:** On a per capita basis, Ireland had the second highest CO2 emissions of the EU-15 in 2005. There has been an improvement in the levels of CO2 emissions per capita, which declined by 2.3 percent between 2000 and 2005. However, total carbon emissions in Ireland increased by 5.4 percent over the period.

Ireland's future energy policy needs to focus on:

- Improving security of supply both in terms of generation adequacy and fuel diversity;
- Restoring energy price competitiveness;
- Improving Ireland's energy market structure;
- Improving Ireland's energy efficiency; and
- Reducing Ireland's dependence on imported fossil fuels.

Telecommunications

Background

Ireland's geographic location and emphasis on high-technology industries means that an efficient and advanced telecoms sector is strategically important for both domestic and overseas manufacturing and services enterprises. Broadband is of strategic importance because of its ability to accelerate the contribution of ICT to economic growth in all sectors, enhance social and cultural development, and facilitate innovation. Widespread and affordable access at a competitive cost can contribute to productivity and growth through applications that promote efficiency, with benefits for business, the public sector, and consumers.

Recent Developments

- The Department of Communications, Energy and Natural Resources is currently preparing a draft policy paper that will review current telecommunications infrastructure policy and analyse policy options in relation to the optimum role for Government in the planning and rollout of next generation broadband. A National Advisory Forum of telecoms experts will be established towards the end of the year to critically evaluate the policy options contained in the draft paper.
- The National Broadband Scheme (NBS), which aims to provide broadband services to areas where the private sector is unable to justify the commercial provision of broadband connectivity, was announced in May 2007. It replaces the Group Broadband Scheme. In September 2007, the Department of Communications selected four candidates, namely BT; eircom; Hutchinson 3G, and an IFA/Motorola consortium, to enter the next phase of the procurement process for the NBS. The Department of Communications expects to conclude the process in Q2 2008.
- As part of the NDP 2007-2013 programme, total indicative investment under the Communications and Broadband programme over the period 2007-2013 is expected to be €435 million. Over the period of the Plan it is intended to build an additional 90 Metropolitan Area Networks (MANs), in association with local and regional authorities, bringing the total to 120 town and cities covered nationwide.
- The EU Roaming Regulation for mobile calls came into force across the EU-27 on the 30th June 2007. This EU regulation enables consumers to benefit from a 'Eurotariff' that sets a maximum limit for calls made (€0.49 excl. VAT) and received (€0.24 excl. VAT) when abroad. Operators are expected to compete below this consumer cap. The price caps will be further reduced in 2008 and 2009.
- At the end of March 2007, the European Commission published a review of developments in telecom markets across member states. It identified a number of concerns in relation to Ireland including the lack of implementation of local loop unbundling. The Commission has also advocated greater co-ordination of European-wide regulation in determining issues like roaming costs, and has suggested the possibility of a US style Federal Communications Commission (FCC) for the European telecoms industry.
- In March 2007, eircom announced plans to invest in Next Generation Networks (NGN). This comprises a €60 million investment to install fibre in its core network, as part of an upgrade that will provide broadband services of up to 25Mbit to businesses and homes using xDSL technologies.
- The Communications Regulation Amendment Act, which was enacted in March 2007, gives the Commission for Communications Regulation (ComReg) enhanced regulatory and enforcement powers akin to those of the Competition Authority. This is part of a bid to overcome remaining obstacles to liberalising the broadband sector.

Key Issues

Broadband

- Broadband take-up totalled 698,000 subscribers (including mobile broadband subscribers) at the end of June 2007, an annual increase of 87 percent. Broadband has overtaken narrowband as the means of Internet connection since late 2006 and 63 percent of all Internet users had a broadband connection at the end of Q2 2007.
- Ireland recorded the highest net increase in broadband subscribers of the OECD countries in the 12 months to June 2007, with 6.6 new broadband connections per 100 inhabitants compared to the OECD average of 3.65 new connections per 100 inhabitants. As a result of this strong growth, there was a slight improvement in Ireland's relative position to 22nd of the OECD countries in June 2007, up from 24th in June 2006.
- Recently released Census 2006 data shows significant variations in broadband take-up by household on a regional basis. In April 2006, the national average was 20 percent of households. Of the eight regions, only two, Dublin and the Mid-East, had broadband penetration levels above the national average, with take-up in Dublin significantly higher at 32.2 percent. Take-up in the Midlands and Border regions was almost half the national average at just 11.8 percent.
- Entry level broadband prices are competitive with those in other countries. The prices for higher speed services are less competitive.
- A key outstanding issue relates to the quality of broadband services available. The range of broadband speeds available in Ireland is poorer than that available in most other countries.
- The availability of backhaul (connections between Irish regional networks and international networks) is critical to the success of the MANs and their role in promoting regional development. The backhaul issue needs to be specifically addressed as part of the MANs rollout programme.
- Ireland needs to emulate global leaders like Japan, Korea, the Netherlands and Sweden in the way that they have encouraged high levels of investment in the next generation of broadband infrastructures and services. Forfás is currently undertaking a review of Ireland's broadband needs in the longer term and is examining national objectives for the development of a 'Next Generation Network' in Ireland.

International Connectivity

- Ireland has significant international capacity (e.g., Eircom, EsatBT, NTL, Global Crossing, Cable & Wireless, Hibernia Atlantic etc.) and has the lowest international leased line costs in the OECD. In terms of regional connectivity, Ireland also has an extensive national fibre network with a range of players (e.g., Eircom, EsatBT, ESB, Aurora, Cable and Wireless, etc).
- Anecdotal evidence suggests that traffic on core networks has grown significantly in the last 18 months.

Mobile

- Ireland has the sixth highest mobile penetration rate of the EU-15 countries. There are now 4.8 million mobile subscriptions in the Irish market, equivalent to a mobile penetration rate of 114 percent.
- Average monthly spend on mobile services in the residential sector is around €45, the highest in the EU.

Waste Management

Background

Maintaining economic progress in Ireland is contingent on a good environment and the availability of modern waste management facilities and services at a competitive cost. Waste management and the associated costs continue to be a key issue for enterprise in Ireland.

Recent Developments

- The Programme for Government indicates a change in waste policy with regard to incineration. It commits to introducing Mechanical Biological Treatment (MBT) facilities as one of a range of technologies to meet the targets to divert biodegradable waste from landfill required under the 1999 EU Landfill Directive. It also states that it will not alter the landfill levy in such a way as to give a competitive advantage to incineration.
- NDP 2007-2013 proposes to invest €753 million of public funding under the waste management sub-programme and has prioritised three areas for investment - legacy landfills, recycling and recovery and thermal treatment. Thermal treatment with energy recovery is the preferred option for dealing with residual waste.
- The EU Commission introduced two initiatives in 2005 to replace the existing 1975 Waste Framework with the aim of reducing the amount of waste that ends up in landfill. The first, the EU Waste Directive, aims to set binding targets for waste for the first time. The second initiative, the Thematic Strategy on the Prevention and Recycling of Waste, focuses on a long-term EU waste strategy.

In February 2007, the European Parliament voted on these initiatives and the main elements of its decision include the introduction of:

- A five-step waste 'hierarchy' that gives priority to prevention, reuse and recycling over incineration and landfill;
- EU waste-prevention targets to stabilise waste production by 2012 to the levels produced in 2008, and for waste production to start declining from 2020; and
- EU targets for reuse and recycling - by 2020, 50 percent of municipal solid waste and 70 percent of waste from industry (including manufacturing) and construction and demolition must be re-used or recycled.

These goals were agreed by the European Council in June 2007.

- The Strategic Infrastructure Act 2006, which came into effect on 31 January 2007, has put in place a streamlined planning process for certain strategic infrastructural projects, including waste, while ensuring that all statutory requirements are observed. The Act provides for the establishment of a Strategic Infrastructure Division within An Bord Pleanála, which will be the sole planning consent authority for almost all major infrastructure development. The legislation is expected to speed up the delivery timeframe for projects which are subject to it.
- During the second half of 2006, the Department of the Environment, Heritage and Local Government consulted on the most appropriate model of regulation for the waste sector as well as the remit and functions of a potential waste regulator. No decision has yet been made on the way forward.

Key Issues

- *Waste Costs:* In terms of waste treatment costs, while landfill gate fees are levelling off, Ireland is the second most expensive country for non-hazardous landfill among the countries benchmarked by Forfás. Ireland remains the most expensive of the benchmark countries for biological waste treatment gate fees following cost increases from €80 per tonne in 2005 to €90 in 2006.
- *Waste Treatment:* The rate of municipal recycling in Ireland has improved significantly, from 13 percent in 2001 to 35 percent in 2005. Ireland continues to be heavily reliant on landfill to treat its municipal waste and currently has no public thermal treatment facilities.
- *Waste Generation:* Ireland has the fourth highest municipal waste generation per capita of the ten countries included in the benchmarking study while manufacturing waste generation per employee is also relatively high.

The main policy issues to be addressed include:

- *Addressing Infrastructure Deficits:* Ireland's over-dependence on landfill and its comparatively poor performance on key benchmarking indicators such as costs and capacity can be traced back to the failure to deliver key waste management infrastructure in recent years. Specific infrastructures that need to be developed include hazardous and non hazardous thermal treatment capacity, biological treatment (composting and anaerobic digestion) and reprocessing capacity for recovered material (e.g. papers, glass and plastic).
- *Removing Barriers to Infrastructure Delivery:* There are a number of impediments to accelerating the delivery of waste infrastructure nationally. These include uncertainty as to the regulatory framework and emerging structures of the market, the lack of coordinated regional waste plans and delays in the planning process.
- *Waste Minimisation and Prevention:* Ireland needs to ensure it is not falling behind its competitor countries in implementing alternatives to waste treatment, namely waste prevention, minimisation and re-use. Investing resources in waste prevention and minimisation offers potential long-term benefits for the competitiveness of enterprises of all types.

Regional Development

Background

The National Spatial Strategy (NSS), which was published in 2002, is a 20 year planning framework designed to achieve a better balance in regional development. The gateways identified in the NSS are Sligo, Dundalk, Letterkenny-Derry and Athlone/Mullingar/Tullamore, complementing the existing established gateways of Dublin, Cork, Galway, Limerick and Waterford.

In today's global environment, trade and mobile investment decisions are influenced by competition from international cities and city-regions. It is therefore crucial that the nine gateways identified in the NSS are successfully developed so that they can make each region in Ireland competitive for the growth of the indigenous sector and the attraction of foreign direct investment.

Recent Developments

- A key goal of NDP 2007-2013 is to support regional development in line with the NSS, with a particular focus on the accelerated development of gateways.
- In addition to general expenditure, a Gateway Innovation Fund (GIF) was launched in May 2007 by the Department of the Environment, Heritage and Local Government. The fund will operate initially on a pilot basis from 2008-2010 with a fund of €300 million and will be allocated on a competitive basis. The fund aims to stimulate collective action across relevant local authorities and stakeholders and innovative approaches to stimulating accelerated development within the gateway. A lead authority will take overall responsibility for managing the process.
- Forfás, in conjunction with the development agencies, has developed a list of key infrastructure priorities for each region. The agencies believe that the implementation of these projects will boost the potential of each region to attract overseas investment and to support and develop indigenous enterprise. These key priorities are listed in Appendix 1.

Key Issues

- The need for local authorities, county councils and relevant stakeholders to take a regional view, rather than county level view, to the developing the potential of the regions.
- The emphasis needs to be on the accelerated development of the gateways as the drivers of growth within each region. With many of the gateways crossing a number of local authorities there is a need to ensure that collaborative structures are put in place at gateway level that can effectively plan and facilitate their development.
- The need to ensure that key infrastructure projects of importance to enterprise development as outlined in Appendix 1 are delivered.
- Continued commitment is needed to ensure the implementation of the NSS and the effective rollout of the GIF.

Roads

Background

There is a strong recognition by Government of the importance of upgrading the national road transport network as a key underpinning of enterprise competitiveness and the mobility of people. While good progress was made through NDP 2000-2006, road infrastructure and traffic management remains a competitiveness issue.

Recent Developments

- Under the Roads Sub-Programme outlined in NDP 2007-2013, some €13.3 billion will be invested in national roads and €4.3 billion in non-national roads. Most of this investment will be used to implement Transport 21 which was announced in November 2005. Some of the principal objectives of the Roads Sub-Programme include:
 - Completion by 2010 of the major inter-urban routes linking Dublin with Belfast, Cork, Galway, Limerick and Waterford;
 - The upgrading of the M50 by 2010 which will convert to barrier free tolling; and
 - Improvements in road links between the NSS gateways.
- The first of the five Major Inter-Urban (MIU) routes was completed in August 2007 with the opening of the 14km Newry to Dundalk A1/N1 dual carriageway.
- Significant progress has been made on a number of key routes for enterprise development:
 - The Arklow-Gorey bypass on the N11 was opened ahead of schedule in September 2007.
 - The N6 Tyrrellspass to Kilbeggan and N52 Mullingar to Belvedere upgrades were completed in May 2007.
 - Work commenced in May 2007 on the N6 Galway to Ballinasloe PPP project. Construction of the Waterford city bypass also began in May 2007.
- The Strategic Infrastructure Act 2006, which came into effect on 31 January 2007, has put in place a streamlined planning process for certain strategic infrastructural projects, including roads, while ensuring that all statutory requirements are observed.

Key Issues

- The delivery of the road infrastructure priorities for enterprise development, as set out in Appendix 1, needs to be accelerated.
- Ireland's transport policy needs to remain aligned with the objectives of the National Spatial Strategy with a particular emphasis on the prioritisation of the gateways to develop and connect key centres and regions that have the critical mass to compete internationally.
- Ensuring value for money is essential. All transport projects under the NDP should come through a rigorous pre-commitment evaluation process. While calculating the return of each project on an individual basis is necessary, calculating the returns of projects in an integrated fashion is also important.

Rail

Background

A good rail infrastructure can improve the mobility of labour, reduce commuting times and improve access to the regions. Good rail services can increase productivity and reduce costs. This not only supports existing firms, but also a country's attractiveness as an investment location and general quality of life.

Recent Developments

- In October 2007, the European Commission adopted a series of initiatives to promote freight transport logistics, including measures to make rail freight more competitive, in particular by ensuring lower transit times and increasing rail's reliability and responsiveness to customer requirements. One approach being proposed to achieve a freight-oriented European rail network is the development of transnational corridors, which includes Dublin-Belfast and Dublin-Cork.
- Under the NDP 2007-2013, just under €13 billion will be invested in public transport, including rail. Most of the future investment in rail has already been captured under Transport 21 which was announced in November 2005. Examples include:
 - Development of the Metro North line from the city centre to Swords via Dublin Airport and Metro West which will be a 25km orbital route connecting Tallaght, Clondalkin and Blanchardstown.
 - Enhancement and extension of the Luas network
 - New commuter rail services in Cork and Galway
- The preferred route corridor for Metro West and Metro North were announced in July 2007. These lines are expected to be completed by 2014.
- The first new train station in Dublin city centre in 116 years was opened at Spencer Dock in March 2007. The station will act as a terminus for new commuter train services between the city centre and West Dublin.
- Iárnrod Eireann continues to upgrade the existing rail stock and the new fleet of 183 railcars from South Korea worth €400 million are to be phased into service by the end of 2008. 67 new carriages purchased in 2005 are now in operation on the Dublin to Cork route.
- Since January 2007, there has been a new hourly train service operating between Dublin and Cork. Limerick intercity services have also seen a significant increase in frequency to 13 services a day in each direction while services on the Maynooth and Dundalk commuter lines have also been improved.

Key Issues

- An integrated approach to spatial and transport planning that can optimise the use of rail and commuter services is required.
- Upgrading of intercity rolling stock and implementation of enhanced business-friendly services on the following routes: Dublin -Galway; Dublin - Waterford; and Dublin - Sligo.
- The majority of the national rail network is single-track.
- There is currently only limited rail freight connectivity to the seaports and none to the airports.
- Electrification of rail transport is currently limited to the DART and Luas and further electrification opportunities need to be explored.

Aviation

Background

International connectivity is of particular importance in an Irish context. 21.4 million passengers travelled through Dublin Airport during 2006, a 16 percent increase on passenger numbers recorded in 2005, while numbers travelling through Cork and Shannon and other regional airports continue to grow year-on-year.

Recent Developments

- Construction plans for Dublin Airport's Terminal 2 were approved by An Bord Pleanála in August 2007. However, it is expected that the decision will be appealed to the courts. The expected completion date for the €609 million project is the end of 2009, assuming construction starts late 2007.
- Aer Lingus is to withdraw the Shannon to Heathrow route with effect from 13th January 2008. Ryanair will start offering three additional daily flights from Shannon to London, one each to Stansted, Gatwick and Luton from January. Ryanair is also introducing a twice-daily service from Shannon to Dublin from November. Aer Lingus is to begin phasing in nine new routes from Belfast between December and February 2008.
- Earlier this year, the Commission for Aviation Regulation (CAR) held a public consultation on how the Dublin Airport Authority's (DAA) revised Capital Investment Programme (including plans for Terminal 2) might be funded. The DAA was proposing to raise capital investment by increasing existing airport charges from €6.34 to €7.50. In July 2007, the CAR decided to leave airport charges unchanged until the next full review of airport charges which is due in 2009. The CAR was satisfied that necessary investment at Dublin Airport could proceed without revising the cap on airport charges between now and the end of 2009.
- Aer Lingus became the first carrier in Europe to launch a route under the bilateral EU-US Open Skies agreement, with the introduction of its Dublin to Washington route in August. The agreement will mean the phasing out of the Shannon stopover. Aer Lingus is also introducing services to Orlando and San Francisco.
- The State airports (Dublin, Cork and Shannon) currently operate under the aegis of the DAA. On dates yet to be confirmed, separate Cork and Shannon Airport Authorities will have the relevant airport assets vested in them and assume full responsibility for the management, development and operation of Cork and Shannon airports respectively.
- Under the Air Transport Sub-Programme, some €1.9 billion will be invested over the period of the NDP 2007-2013. As the DAA operates under a commercial mandate, its investment will be funded from its own internal resources. Six regional airports, all in private ownership, are eligible to apply for State assistance under the Transport Programme.

Key Issues

- Access to markets is regarded as the single most important factor for companies in deciding where to locate. In light of Ireland's geographic location and our dependence on export markets, the relatively poor quality of Ireland's and Dublin's air transport infrastructure is of concern from an enterprise development and national competitiveness perspective. According to the NCC's Annual Benchmarking Report, the perceived quality of Ireland's air transport infrastructure was fourth lowest of the 18 countries benchmarked.
- From an enterprise development perspective, Ireland requires efficiently functioning and competitively priced airports that benchmarks well with competitor cities in terms of international connectivity, airport charges, quality of service and access to and from the airport. The range of destinations available, the frequency of flights, and the ability to return on the same day for short haul flights is also important.

- New infrastructure, in the form of a new terminal, piers, runways etc, is needed for Dublin airport. The current situation of congestion and over-crowding at Dublin airport is damaging our international competitiveness and reputation.
- Future charges at Dublin airport must incentivise the investment necessary to provide Ireland with an efficient and well functioning airport that is competitive, both in terms of its service levels (e.g. appearance, queuing times, passenger seating etc.) and its charges. It is also critical that decisions made support the development of the infrastructure in a timely fashion, and that adequate capacity is planned for to ensure that the airport is not characterised by constant development in the long term.
- Improved business oriented services from the regional airports are required to support regional development in line with the NSS, particularly the accelerated development of the gateways.
- Ease of access to and from the airports is critical. Proposals to improve access (e.g. rail links, inter-urban road networks, etc) can reduce travel times, extend the hinterland of key airports and promote greater competition.

Ports

Background

National and international connectivity is critically important in an increasingly globalised economy. In light of Ireland's geographic location and our dependence on export markets, Ireland's commercial ports are vital to the country's prosperity. In volume terms, 99 percent of Ireland's international trade is handled by the ports. It is therefore essential that Ireland has sufficient ports capacity to meet future needs, that the ports operate efficiently and are well connected to the internal road/rail network.

Recent Developments

- In October 2007, the European Commission adopted a series of initiatives to promote freight transport logistics, including measures to create a framework which will allow European ports to attract investment for their modernisation and put maritime freight transport on an equal footing with other transport modes.
- Drogheda Port Company, whose existing facilities are currently near full capacity, has been given permission by the Government to develop a new €210 million deep water port in north Dublin jointly with Castle Market Holdings, a subsidiary of Treasury Holdings.
- The Government's Ports Policy Statement (2005) highlights that the State-owned commercial port companies should fund their own operations and infrastructural requirements without assistance from the Exchequer. It is estimated that the commercial port companies will invest approximately €450 million in a range of proposed projects over the period 2007-2013.
- Some €31 million of Exchequer funding has been included in the NDP for investment in 13 regional harbours.
- In January 2007, the Institute of International Trade of Ireland (IITI) published a study that reviewed trade and services on the North Atlantic to determine whether a direct shipping service between the island of Ireland and North America might be viable. The study recommended that there is sufficient LoLo cargo generated by the island of Ireland to justify a direct shipping service between Ireland and North America.

Key Issues

- The level of goods handled (imports & exports) in volume terms at Irish ports has grown strongly since 1996. In 2005, Irish ports handled over 52 million tonnes of goods, a 54 percent increase on the level of goods handled in 1996.
- All of Ireland's unitised trade (Ro-Ro and Lo-Lo) is handled by ports on Ireland's eastern and southern coastlines (Drogheda, Dublin, Rosslare, Waterford and Cork) reflecting demand from high value/low volume product industries for frequent and reliable shipping services to ports in the UK and continental Europe. In 2005, Dublin dominated Ireland's unitised trade, handling 63 percent of Lo-Lo traffic and 79 percent of Ro-Ro traffic. After Dublin, Waterford handles the largest percentage of Lo-Lo traffic (18 percent) while Rosslare handles 17 percent of Ro-Ro traffic.
- Further work is required to assess:
 - The changing needs of the enterprise base;
 - The adequacy of internal road/rail access to ports; and
 - The levels of efficiency and competition between Irish ports.

Water/Wastewater

Background

Water and wastewater infrastructure are a vital component of national infrastructure. Water is required for many industrial and service activities and is a prerequisite to the efficient functioning of the economy. Wastewater treatment is essential for environmental sustainability and to protect public health.

Recent Developments

- The Water Services Investment Programme for the period 2007-2009 was published in September 2007. It comprises 955 projects with an overall capital value of €5.8 billion.
- The Water Services Bill (transposing the EU Water Framework Directive) was signed into law in May 2007.
- The EU Water Framework Directive, which aims to promote sustainable water use based on long-term protection of available water resources, was adopted by member states in December 2000. The Irish Water Services Act, which transposed this directive, was enacted in May 2007. Among the main objectives of the EU Water Framework Directive are to:
 - Achieve a good level of water quality by 2015;
 - Establish a water management system based on river basins instead of administrative boundaries - plans to be adopted by end of 2009; and
 - Introduce pricing policies based on the polluter pays principle - the Commission estimates 40 percent of water is wasted across the EU.
- The first implementation report was published by the European Commission earlier this year and among the main findings are that significant progress has been made but a number of shortcomings exist including the inappropriate transposition of the Directive into national law; and the considerable lag by a number of countries in incorporating economic instruments (e.g. water pricing) into water management systems. This applied to most Member States including Ireland.

Key Issues

- The timely delivery of the Water Services Investment Programme is essential to ensure the future needs of Ireland's growing population and the increasing business demands are met.
- Charges for water services differ between local authorities, depending on the cost of their water and wastewater infrastructure programmes, the cost of operating their treatment plants and the cost of administering the metering/billing elements of their programmes. Water services metering for non-domestic users was to be introduced by all local authorities by the end of 2006 but a number are still outstanding.



APPENDIX I: Infrastructure Priorities for Enterprise Development

Priority Projects for the Development Agencies	Status/Progress
ROADS	
N1/A1: Dundalk-Newry dual carriageway	Completed August 2007 (A1 Newry by-pass upgrade due for completion late 2009)
N2/A5: Dublin-Derry route	Ongoing - Castleblaney by-pass due for completion Q3 2007 but not yet open
M3 - Dublin-Navan Motorway	Due for completion in 2010
N6 - Dublin - Galway route	Due for completion in 2010
N6 - Galway outer by-pass	At the preliminary design phase
N7 - Dublin - Limerick route	Due for completion in 2010
N7/N18 - Limerick Southern Ring Road - Phase 2 (Fourth Shannon River crossing)	Under construction - to be completed 2010
N8 - Dublin - Cork route	Due for completion in 2010
N9 - Dublin - Waterford route	Due for completion in 2010
N14 - Lifford-Letterkenny route	At the preliminary design phase
N15 - Sligo-Letterkenny route	Ongoing - Bundoran/Ballyshannon by-pass open
N16/A4 - Sligo-Dungannon	At the preliminary design phase
N17 - Galway to Sligo	At the preliminary design phase
N18 - Limerick to Galway route	Ennis by-pass open Crusheen to Oranmore is at preliminary design phase
N22 - Cork to Killarney/Tralee route	Cork Northern Ring Road - at route selection phase, remainder is at preliminary design phase
N28 - Cork to Ringaskiddy route	At route selection phase
M50 Upgrade	Due for completion in 2010
N52/N80 - Connecting linked gateway of Athlone, Mullingar and Tullamore	N52 upgrade is complete N80 upgrade is preliminary design phase
N59 - Belmullet-Ballina route	At route selection phase
N60 - Castlebar-Roscommon route	At route selection phase
N69 - Limerick to Tralee route	At constraints study phase

RAIL

Kildare Rail Project (Heuston-Hazelhatch)	Engineering Works underway; completion due in 2010
Re-opening of Navan rail line	Phase 1 to Dunboyne due for completion in 2009; Phase 2 to Navan due 2015.
Luas extensions and new line to Lucan	Consultations ongoing - all to be completed by 2015
Metro North (Stephens Green via Airport to Swords)	Due to be completed by 2013
Metro West (linking Tallaght, Clondalkin and Blanchardstown)	Due to be completed by 2014
Examination of the feasibility of re-opening of the Athlone-Mullingar line	Not in T21
Improve frequency on the Belfast-Dublin route	Ongoing
Increase speed and frequency of services to Sligo, and introduce rail carriages	Ongoing
Time of travel on Waterford to Dublin line to be reduced to two hours	Ongoing
Progress implementation of CASP	Due to be completed in 2009
Reopening of the Western Rail Corridor	Athenry to Ennis due for completion 2008; Athenry to Tuam due 2011; Tuam to Claremorris due 2014.

PORTS

Developments at the Ringaskiddy deep water port	Consultation process underway.
Regeneration of Galway docks	Ongoing

AIR

New terminal at Dublin Airport	Planning permission granted; due for completion in 2009.
Improved frequency of flights between Shannon and Dublin	Ryanair to begin twice-daily service in November
Expand business oriented services to Belfast International Airport	Aer Lingus to phase in nine new routes between December and February
Expand business oriented services from Waterford Airport	Ongoing
Expand business oriented services from Knock and Galway, especially on London routes	Aer Arann to increase Galway to London Luton flights to three times daily from mid-October 2007.

WATER/WASTEWATER

Increased water and wastewater capacity in the North East region, sufficient to meet the needs of a large scale project at Mullagharlin (Dundalk)

Completion of water and wastewater capacity infrastructure in Sligo and Letterkenny

Improvement in water and wastewater provision and planning in West region

WASTE

Development and implementation of the regional waste management plans

ELECTRICITY

Improve resilience in the electricity transmission and distribution network through the TSO Development Plan 2006-2010

Construction of a second 110kV line from Arva to Shankill, and a 400kV line from Woodland to mid-Cavan.

Installation of a 110kv loop in the West of Donegal

Dundalk water supply strategic study to commence 2009.

Sligo water supply under construction and its wastewater scheme improvement to commence in 2008
Letterkenny upgrade under construction.

Ongoing

Ongoing

Ongoing

Due for completion December 2012

Due for completion December 2010

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