Country : Denmark

Project list

Sector	*Sub-sector*	*Project name*	*Implementing agency*	*Description*	*Included in national investment plan (yes/no)*	*Status*	*Total investment cost (EUR bn)*	*Investment in 2015 – 2017 (EUR bn)*	*Barriers/solutions*
Transport	Missing links, rail + road	Fehmarn belt tunnel- The fixed link between Scandinavia and Germany	Ministry of Transport	The Fehmarn belt fixed link realizes a fixed, close, and direct connection between Scandinavia and continental Europe. The duration of a train journey between Hamburg and Copenhagen will be cut short from about four and a half to merely three hours. In the future, freight trains will be able to avoid the 160 km longer detour via the Great Belt. This will create a strong transport corridor between the Øresund region in Denmark/Sweden and Hamburg in Germany. The project is on the TEN-T core network	Yes	Planning has been finalised in 2014. The German authorities' approval process has started. Bill on construction is expected to be introduced to the Danish Parliament in February 2015. Preparatory activities have started. Works to start in second half of 2015. Project concluded end 2021.	6,2	2,3	Co-financed by the EU. The Fehmarn belt fixed link will be financed by the future earnings from tolls and user charges. Denmark is responsible for financing the coast-to-coast section and the Danish land works. To this end, the state owned company Femern A/S raises loans on the international financial market. The Danish government is providing state guarantees for these loans. As a result of these guarantees, the loans can be obtained by Femern A/S at the same terms and conditions available to the state.
Transport	Bottle-necks and increased speed	The Signaling programme	Ministry of Transport	ERTMS 2: ERTMS Level 2, Baseline 3. A total replacement of all signaling systems on the entire conventional railway network in Denmark with ERTMS by the end 2021 and all signaling systems on the Copenhagen S-line with CBTC by 2018 [Cost include 514 M. EUR for S-bane in Copenhagen].	Yes	Ongoing. Early deployment Langå-Frederikshavn completed by 2016. Full roll out entire network by 2021.	2,5	0,83	A combination of EC grants and MS finance is envisaged.

Transport	Bottle-necks and increased speed	Ringsted-Rødby – upgrade of hinterland connections to the Fehmarn belt fixed link.	Ministry of Transport	Ringsted-Fehmarn: From 2015 to 2021 Banedanmark will upgrade and renew the 115 km long railway line to a new, future-proof line. The project includes: Electrification Ringsted – Rødby, Construction of new double track between Vordingborg and Rødby (except Storestrømsbridge), Upgrading of top speed to 200 km/h, Passing tracks for 1.000 meter long freight trains and a passenger train station at Holeby in the Southern part of Lolland. Financed by yields from Femern A/S according to the "Danish Model". The project is on the TEN-T core network.	Yes	Planning has been finalised in 2014. Bill on construction is expected to be introduced to the Danish Parliament in February 2015. Preparatory activities have started in 2014. Works to start in second half of 2015. Project concluded end 2021.	1,3	0,54	Please see financing of the Fehmarn Belt fixed link, the project is part of the wider Fehmarn project.
Transport	Bottle-necks and increased speed	The Danish Electrification programme	Ministry of Transport	Full electrification of the following sections: Esbjerg-Lunderskov, Køge Nord-Næstved, Fredericia-Aalborg, Roskilde-Kalundborg and Vejle-Struer.	Yes	Works ongoing: May 2014-2026.	2,6	0,86	A combination of EC grants and MS finance is envisaged.
Transport	Bottle-necks and increased speed	New High speed railway line Copenhagen-Ringsted	Ministry of Transport	New rail line between Copenhagen and Ringsted: New high speed railway line between Copenhagen and Ringsted via Køge (up to 250 km/h for passenger trains). Will result in a better timetable with more departures, shorter travel times and fewer delays. Capacity will also be increased for freight trains. The project will be on the TEN-T core network upon completion.	Yes	Works ongoing, project completed by 2018.	1,6	0,79	A combination of EC grants and MS finance is envisaged.
Transport	Bottle-necks and increased speed	New Storestrøm Bridge	Ministry of Transport	New Storestrøm bridge (primarily rail, but includes also road and bicycle lanes): Located on the Ringsted-Fehmarn railway line, the project removes a major bottleneck in the TEN-T-network. Primarily a railway project that also includes road and bicycle lanes. The project is on the TEN-T core network.	Yes	EIA exercise ongoing. Works to start end 2016/early 2017	0,6	0,11	A combination of EC grants and MS finance is envisaged.

Transport	Road corridors and missing links	Expansion of the Køge Bugt Motorway (E47/E20/E55) between Greve S and Køge S	Ministry of Transport	The project will reduce congestion in a main corridor, which connects the major cities of Denmark as well as Scandinavia and Central Europe. The project will also improve the conditions for thousands of daily commuters. Very high socio-economic rate of return. The project is on the TEN-T core network.	Yes	The section from Greve S to Solrød S (1st stage) is expected to open in 2015, one year earlier than originally planned. The section from Solrød S to Køge (2nd stage) is expected to open at the latest in 2018.	0,333	0,09	Financed by MS
Transport	Bottle-necks and increased speed	New double track railway across western Funen	Ministry of transport	New railway Kauslunde - Odense, about 35 km. 4 km shorter than the present line, thus saving travel time for passenger and freight trains. The project is part of Train Fund Denmark and is an important part of the one hour model between the five biggest cities in Denmark. The project is on the TEN-T core network.	Yes	EIA process has begun and the project is projected to open in the mid-2020's	0,7	0,01	A combination of EC grants and MS finance is envisaged
Transport	Bottle-necks and increased speed	Fixed link across Vejle Fjord in Jutland	Ministry of Transport	The project is part of Train Fund Denmark and is an important part of one hour model between the five biggest cities in Denmark. The project is on the TEN-T core network.	Yes	EIA process has begun and the project is projected to open in the mid-2020's.	0,6	0,01	A combination of EC grants and MS finance is envisaged.
Transport	Bottle-necks and increased speed	Speed increase Ringsted-Odense	Ministry of Transport	Ringsted-Odense speed increase: Speed increase Ringsted-Odense. It is the Danish Government's ambition to reduce the travel time between the larger Danish cities, including between Copenhagen and Odense, to one hour. Infrastructure investments are therefore required in order to increase train speed between Ringsted and Odense. This implies upgrades in Ringsted, Sorø, Slagelse, and at the Great Belt Bridge etc. [pending political decision on preferred technical solution as per 10/2014]. The project is on the TEN-T core network.	Yes	EIA ongoing.	0,1	0,03	A combination of EC grants and MS finance is envisaged.
Transport	Bottle-necks and increased speed	Vamdrup-Vojens	Ministry of Transport	Double track Vamdrup and Vojens: Construction of double track in Southern Jutland in order to increase capacity and secure the current freight connection between Scandi-	Yes	Works ongoing. Project concluded by end 2015.	0,1	0,02	A combination of EC grants and MS finance is envisaged.

				navia and Germany. The project is on the TEN-T core network.					
Transport	Road corridors and missing links	Expansion of the Elsinore Motorway (E47) between Øverødvej and Hørsholm S (stage 1)	Ministry of Transport	The project will reduce congestion in the important corridor between Copenhagen and the highly populated area north of Copenhagen. Positive socio-economic rate of return	Yes	The project is on schedule and expected to open in 2016.	0,198	0,06	Financed by MS
Transport	Road corridors and missing links	New motorway between Låsby and Funder (the Silkeborg Motorway)	Ministry of Transport	The project will include Silkeborg in the Danish motorway network and complete the motorway between Aarhus and Herning. It will improve the traffic flow, mobility and road safety in the Silkeborg area as well as the connections between East Jutland and West Jutland. Positive socio-economic rate of return.	Yes	The construction work is in progress. The section between Hårup and Låsby is 10 months ahead of schedule and has opened on December 1, 2014. The rest of the motorway between Hårup and Funder is expected to open as planned in the autumn of 2016.	0,904	0,34	Financed by MS
Transport	Road corridors and missing links	New motorway between Herning and Holstebro	Ministry of Transport	The project will include Holstebro in the Danish motorway network, which will improve the traffic flow, mobility and road safety in the Herning and Holstebro areas. The project will also improve the accessibility of a future regional hospital in Gødstrup. Positive socio-economic rate of return.	Yes	The highway to the hospital in Gødstrup expected to open in 2017, with some subsequent additional work. The entire highway is expected to open in 2018. The work is going according to schedule.	0,526	0,35	Financed by MS
Transport	Road corridors and missing links	New motorway between Motorring 4 and Tværvej (2nd stage of the Frederikssund Motorway)	Ministry of Transport	The project will contribute to the inclusion of Frederikssund in the Danish motorway network, which improves the traffic flow, mobility and road safety in the area as well as the connections between Frederikssund and Copenhagen. High socio-economic rate of return.	Yes	The construction work is in progress and the motorway is expected to open as planned in the autumn of 2015.	0,175	0,04	Financed by MS
Resources and Environment	Natural resources: efficient and secure availability	Better use of materials: Establishment of central resources facility for sorting and recycling to recover materials	Central and decentral authorities	To ensure growth and jobs in the ressourcesector and at the same time improve value of the waste generated in Europe, improved sorting techniques and facilities are needed to be a valuable resources base for commercial solutions for turning these materials into new products. 2-	No	Subsolutions are being developed, but lager facilities are needed to serve as genuine resources base			Economic and barriers in contract to investing in smart green solutions

	public private			3 large facilities will be constructed with the private sector.					
Re-sources and Envi-ronment	Natural re-sources: efficient and se-cure avai-lability public private	Restructuring fund for energy optimizing the water	Min. for Environ-ment	The technological development of energy recovering from sludge has increased in recent years, establis-hing a potential of waste water treatment plants moving from being net consumer to net provider of energy. Whereas waste water treatment plants today consumes 1-2 % of the total energy consumption, the plants will with adequate techno-logy become providers of 0,5 % total energy consumption. It is suggested to establish an EU fund of 200 mill euros for energy optimizing the water sector.	No	Not initiated	200 MEUR		
Re-sources and Envi-ronment	Resilience to Climate Change Public private	Climate change adapta-tion Fund	Min. for Environment	Danish municipalities are in the process of implementing separate sewage systems, which will increase capacity in handling extreme rain. Private house holdings must pay for separate pipes on their own grounds, causing economic problems for certain citizens. The Fund will pro-vide guaranties for loans to private real estate owners who are met with demand for separate pipes, thus providing for growth in the construc-tion sector. It is estimated that a fund of 60 MEUR will provide guarantees for activities for a total amount of 200 MEUR, thus genera-ting employment for approximately 1500 people.	*No*	Not initiated	60 MEUR	60 MEUR	Financing
Resources and Envi-ronment	Resilience to Climate Change	Coastal and Nature Protection Projects	Ministry of the Environ-ment	A Coastal Protection Analysis is envisaged to estimate the needs, risk and values in connection to coastal protection in the perspective of upcoming climate changes will be ready by the end of 2015. Based on	Elements of na-tional co-financing to be expected	The Coastal Protection Analysis will be ready by the end of 2015, and projects can be launched in 2016.	A rough estimate of the need of coastal protection is 40 million Euros yearly. On top of this comes		

				this analysis projects can be developed and financed. These projects will secure the infrastructure in thinly populated areas of Denmark. It is necessary for these areas to have a sustainable infrastructure in order to sustain and develop growth and tourism. In areas without relevance of coastal protection other projects can be developed. For instance 10 large scale urban climate water projects that create a buffer capacity for large rainfalls or high sea level events while it also forms new green spaces for the benefit of settlement, recreation and nature improvement. The initiative could contain everything from actual new wetlands to the reopening of urban streams with surrounding buffer capacity. In the widest understanding there may also be funding for the relocation of residences / technical assets / infrastructure to enable realization. There will be growth and employment pay offs in such a content.			the large scale urban climate water projects		
Resources and Environment	Resilience to Climate Change	Coastal Protection Western Limfjord, Jutland	Ministry of the Environment	Over the last decade floodings in the western parts of the Limfiord in North western Jutland have increased significantly, as has the need of dredging shipping lanes through the Fiord. Preliminary rapports show a potential reduction in dredging effort and significantly reduced risk of flooding of the municipalities along the Limfiord if concrete measures are taken to secure the development of the Fjord. A solution to the challenges in the	Elements of national co-financing to be expected	Projects can be launched in 2016	A rough estimate is that further analysis will amount to 4 mill. Euros and that the initial costs of a permanent solution will roughly amount to 40 mill. Euros.		

				western Limfiord will result in local growth and potentially significant job creation in this peripheral area of Jutland. This initiative will also combat oxygen depletion etc. and thus develop and sustain the environment of the Limfjord which is important in an environmental as well as a growth perspective (tourism, fishery etc.).					
Resources and Environment	Resilience to Climate Change	Removal of bunkers at the West Coast of Jutland	Ministry of the Environment	The Danish government in cooperation with local municipalities initiated removal of more than 120 bunkers at the west coast of Jutland. These bunkers posed, due to deterioration, an immediate danger to the large amount of tourists visiting the local beaches. Only bunkers which proved an immediate danger were removed and there is still a large number of bunkers left which, in the coming years, will become dangerous to visitors due to erosion. Removal of the remaining bunkers will benefit the tourist industry in the peripheral localities at the Danish west coast and result in creation of jobs and local growth.	Elements of national co-financing to be expected	The project is financed by national funding until the first half of 2015. At that time around 120 bunkers will have been removed. From 2016 there is a need for further financing in order to make sure that the remaining bunkers will not pose a danger to visitors and tourists.	Removal of the remaining potentially dangerous bunkers will amount to an estimate of 3 – 5 million Euros.		
Energy Union. (iv) Connections and production.	Electricity transmission	Viking DKW-GB	National Grid Interconnector Holdings Limited Energinet.dk	An electrical interconnector (HVDC) between Denmark and UK, which accelerates the EU electricity market coupling. Denmark's energy system is highly diversified with high degrees of interconnection to other EU states with hydropower (e.g. Sweden) and continental thermal capacity (e.g. Germany).	No	A cooperation agreement to develop the project has been agreed between Energinet.dk and National Grid in the UK and a common project organization has been set up. Discussions are ongoing with the regulators in Denmark and the UK concerning the regulatory setup for the interconnector.	1,9	0,2	Investment gap due to different regulatory frameworks. Planning permit complications due to line crossing the territorial waters of several member states. Risk of significant increase in reserve costs on one side or that the

									choice of cable concept is at a less economical scale.
Energy Union. (iv) Connections and production	Electricity transmission	DKW-DE WestcoastPCI 1.3.1.: Interconnection between Endrup (DK) Niebüll (DE)	Tennet TSO GmbH; Energinet.dk	A 400 kV link between Germany and Denmark along the west coast from Niebull in Germany to Endrup in Denmark.	No	Ten-T TSO GmbH and Energinet.dk has set up a common project organization. The technical and economic investigations of alternatives are ongoing. The preferred solution will be defined by the end of November.	0,3	0,1	The project will not be economically viable if established as underground cables. Overhead lines on the other hand would run contrary to present political agreement that new transmission lines must be established as underground cables. The results of the cost benefit investigation of different possible project variants have to be discussed with Tennet TSO GmbH before further actions are taken.
Energy Union. (iv) Connections and production.	Electricity transmission	DKW-DE Step 3 PCI 1.4.1: Interconnection between Kassø (DK) - Audorf (DE)	Tennet TSO GmbH; Energinet.dk	An upgrade of the existing connections between Denmark and Germany on the Eastern part of the Danish-German border. The purpose is to increase the trading capacity between the two countries	No	Ten-T TSO GmbH and Energinet.dk has set up a common project organization. T The technical and economic investigations of alternatives are ongoing. The preferred solution will be defined by the end of November.	0,1	0,1	The cost benefit investigation of different possible project variants is not finalized yet and may depend on the ability to finance the project.
Transport	Corridors and missing links,	New Light rail systems in Copenhagen, Aarhus,	DG MOVE	Construction of four new light rails systems in Aarhus, Copenhagen, Odense and Aalborg projected to open in the period 2017-2021. State-	Yes	The light rail in Aarhus is under construction and expected to open in 2017. Projects in Odense, Copenhagen and Aalborg are	1,9	0,8	The projects are co-funded by the Danish state and local authorities, financ-

	light rail	Odense and Aalborg		of-the-art light rail solutions are a political priority in developing sustainable cities and making public transport more attractive in urban regions with high traffic density. The responsibility for design, construction, operation and maintenance the new light rail systems is placed in separate companies (owned by state and local authorities) partnering with private contractors		undergoing planning and expected to open in 2020/2021. Mastering planning and construction of light rail systems is a competence that is much needed but – as of now – of limited availability in both the public and commercial sector in Denmark. Thus the abovementioned projects utilise different models of public-private partnerships that can more effectively attract competence from abroad.			ing their investment through loans. Inclusion in the EU programme would provide a wider range of options for financing the projects.
Telecomunications	Digital infrastructure	Long term financing for investments in digital infrastructure	DG CONNECT	The digital infrastructure is paramount in realising the potential in the digital economy. Generally speaking Denmark has a well-developed digital infrastructure. In recent years, Denmark has however seen a drop in investments in digital infrastructure. As a guiding principal investments in digital infrastructure should be based on commercial interest. Long term financing opportunities for investment in digital infrastructure can contribute to making investment in digital infrastructure more attractive. It could be in the form of guaranties or lending opportunities, for example through investment banks, directed towards project holders, be it commercial companies, municipalities or other project holders.	[No]	Depending on when long term financing opportunities can be made available roll out can begin in 2015	0,4	0,2	Investment in broadband infrastructure should be based on a principal of commercial interest, and governments should as a principle abstain from founding digital infrastructure. An intervention should maintain that investment are based primarily on commercial interests, and should therefore focus on improving the access to long term financing.