

Baltic Energy Market
Interconnection Plan
GRIP

ANNEX A: INFRASTRUCTURE PROJECTS

Amber
Grid



conexus
BAL TIC GRID

elering

ENERGINET

Gasum



SWEDEGAS

Balticconnector

| TRA-N-895 | Project | Pipeline including CS | Non-FID |
|--|--|-----------------------|----------|
| Update Date | 20/05/2016 | | Advanced |
| Description | New bidirectional offshore pipeline (Inkoo-Paldiski, DN500, 80 bar) of 80 km, plus 50 km onshore pipeline in EE (Kiili-Paldiski pipeline, DN 700, 55 bar) and 20 km onshore pipeline in FI (Siuntio-Inkoo pipeline, DN500, 80 bar) including metering and compressor stations at both ends with a daily nominal capacity of 7.2 mcm/day. The power of each compressor station is about 10 MW. | | |
| Regulatory Decisions and similar material conditions | The Regulators of Finland (Energiavirasto) and Estonia (Konkurentsiamet) have made a common CBCA decision for the Balticconnector and Estonia-Latvia interconnection project. | | |

Capacity Increments Variant For Modelling

| Point | Operator | Year | From Gas System | To Gas System | Capacity |
|---------------------------------|------------|------|-----------------|---------------|------------|
| Balticconnector / Paldiski (EE) | Elering AS | 2019 | EE | FI/BAC | 79.0 GWh/d |
| | Elering AS | 2019 | FI/BAC | EE | 79.0 GWh/d |

| Sponsors | General Information | | Financing | Barriers (Count) |
|---|-----------------------------|-------------------------------|-----------|------------------|
| EE Kiili pressure reduction station | Promoter | Elering AS | | |
| Elering AS 100% | Operator | Elering AS | | |
| EE Kiili-Paldiski pipeline | Host Country | Estonia | | |
| Elering AS 100% | Status | Planned | | |
| EE Paldiski metering and Compressor station | Website | Project's URL | | |
| Elering AS 100% | Publication Approval Status | Approved | | |
| FI Inkoo metering and compressor station | | | | |
| Baltic Connector OY 100% | | | | |
| FI Inkoo-Siuntio pipeline | | | | |
| Baltic Connector OY 100% | | | | |
| FI-EE Inkoo-Paldiski Offshore pipeline | | | | |
| Baltic Connector OY 50% | | | | |
| Elering AS 50% | | | | |

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | |
|-------------------------|--|--------------------------|------------|----------|------------------------------|-----------------------------|
| Part of NDP | <i>Yes (EESTI GAASIÜLEKANDEVÕRGU ARENGUKAVA 2016-2025)</i> | Pre-Feasibility | | 12/2005 | Considered TPA Regime | <i>Regulated</i> |
| | | Feasibility | 01/2006 | 12/2006 | Considered Tariff Regime | <i>Regulated</i> |
| NDP Number | 3.2 | FEED | 01/2016 | 02/2016 | Applied for Exemption | <i>No</i> |
| Currently PCI | <i>Yes (8.1.1)</i> | Market Test | | 03/2016 | Exemption Granted | <i>Not Relevant</i> |
| | | Permitting | 12/2012 | 01/2018 | | |
| CBCA Decision | <i>Yes (2016-04-22)</i> | Supply Contracts | | 11/2016 | Exemption in entry direction | <i>0.00%</i> |
| Market Survey | | <i>Other(2016-03-09)</i> | FID | | 09/2016 | Exemption in exit direction |
| | | Construction | 11/2016 | 12/2019 | | |
| | | Commissioning | 2019 | 2019 | | |

Pipelines and Compressor Stations

| Pipeline Section | Pipeline Comment | Diameter (mm) | Length (km) | Compressor Power (MW) |
|------------------|--|---------------|-------------|-----------------------|
| EE Onshore | Kiili-Paldiski onshore pipeline, Paldiski compressor station | 700 | 50 | 10 |
| FI Onshore | Inkoo-Siuntio pipeline, Inkoo compressor station | 500 | 20 | 10 |
| Offshore | Inkoo-Paldiski offshore pipeline | 500 | 80 | |
| Total | | | 150 | 20 |

PCI Details

| | |
|--------------------------------------|---|
| PCI Benefits | Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity |
| General Criteria Fulfilled | Yes |
| Specific Criteria Fulfilled | Competition, Market Integration, Security of Supply, Sustainability |
| Specific Criteria Fulfilled Comments | The purpose of the Balticconnector natural gas pipeline project is to interconnect the Finnish and Estonian natural gas transmission networks and improve the energy security of the Baltic-Finnish region. The integration of the Finnish and Estonian gas infrastructures will ensure a more coherent and diverse natural gas transmission network in the Baltic Sea region, guarantee the security of natural gas supply for the north-eastern Member States of the EU by lifting Finland out of the current energy isolation and enhance EU energy solidarity by providing needed technical implementations for energy independence. The projects also target increased regional cooperation and have a strong focus on consumers and vulnerable energy customers. The aim is to move to Finnish-Baltic single entry-exit zone, which has been identified as the best fit solution in the "Baltic regional gas market study". |

Time Schedule

| | |
|------------------------|------------|
| Grant Obtention Date | 17/04/2015 |
| Delay Since Last TYNDP | |
| Delay Explanation | |

Benefits

| | |
|-------------------------|--|
| Main Driver | Regulation-Interoperability |
| Main Driver Explanation | Balticconnector will lift Finland out of the current energy isolation and will provide Finland an opportunity to join in the European single gas market and to terminate the derogations on the EU gas market legislation. |
| Benefit Description | Project has several qualitative and quantitative benefits, such as increase in energy security, price convergence in the region, development of the energy market etc. |

Barriers

| Barrier Type | Description |
|--------------|---|
| Financing | Availability of funds and associated conditions |

Enhancement of Estonia-Latvia interconnection

| TRA-N-915 | Project | Pipeline including CS | Non-FID |
|--|--|-----------------------|----------|
| Update Date | 15/07/2016 | | Advanced |
| Description | <p>The project composes of implementation of reverse flow in Karksi metering station in Estonia and of a compressor station in Puiatu, Estonia. The reverse flow gas measuring station would be erected to the location of the existing measuring station in Karksi. Karksi reverse flow enables the measuring of gas quantities thru Estonia with the main advantages of reverse flow used after the commissioning of the Balticconnector offshore pipeline. Karksi reverse flow enables the full use of Inculkalns UGS for all the market participants. Puiatu compressor station enables the transportation of gas thru Estonia and the Balticconnector offshore pipeline to the Finnish gas market. The current system design does not enable the full use of the planned offshore pipeline without a compressor station in south of Estonia. Puiatu compressor station is an integral part of the physical implementations needed for market integration between the Baltics and Finland.</p> | | |
| Regulatory Decisions and similar material conditions | <p>The Regulators of Finland (Energiavirasto) and Estonia (Konkurentsiamet) have made a common CBCA decision for the Balticconnector and Estonia-Latvia interconnection project.</p> | | |

Capacity Increments Variant For Modelling

| Point | Operator | Year | From Gas System | To Gas System | Capacity |
|--------|------------|------|-----------------|---------------|-------------|
| Karksi | Elering AS | 2019 | EE | LV | 105.0 GWh/d |
| | Elering AS | 2019 | LV | EE | 42.0 GWh/d |

| Sponsors | | General Information | | Financing | Barriers (Count) |
|---------------------------|------|-----------------------------|--------------------------------------|-----------|------------------|
| Karksi metering station | | Promoter | <i>Elering AS</i> | | |
| Elering AS | 100% | Operator | <i>Elering AS</i> | | |
| Puiatu Compressor Station | | Host Country | <i>Estonia</i> | | |
| Elering AS | 100% | Status | <i>Planned</i> | | |
| | | Website | <i>Project's URL</i> | | |
| | | Publication Approval Status | <i>Approved</i> | | |

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | |
|-------------------------|---|------------------|------------|----------|------------------------------|--------------|
| Part of NDP | Yes (EESTI GAASIÜLEKANDEVÕRGU ARENGUKAVA 2016-2025) | Pre-Feasibility | | 01/2015 | Considered TPA Regime | Regulated |
| | | Feasibility | 01/2015 | 01/2016 | Considered Tariff Regime | Regulated |
| NDP Number | 3.2 | FEED | 05/2015 | 05/2016 | Applied for Exemption | No |
| | | Market Test | | 03/2016 | Exemption Granted | Not Relevant |
| Currently PCI | Yes (8.2.2) | Permitting | 09/2015 | 09/2016 | | |
| | | Supply Contracts | | 03/2018 | Exemption in entry direction | 0.00% |
| CBCA Decision | Yes (2016-04-22) | FID | | 09/2016 | Exemption in exit direction | 0.00% |
| Market Survey | Other(2016-03-09) | Construction | 04/2017 | 12/2019 | | |
| | | Commissioning | 2019 | 2019 | | |

Pipelines and Compressor Stations

| Pipeline Section | Pipeline Comment | Diameter (mm) | Length (km) | Compressor Power (MW) |
|----------------------|------------------|---------------|-------------|-----------------------|
| Karsi GMS, Puiatu CS | | 0 | 0 | 10 |
| Total | | | 0 | 10 |

PCI Details

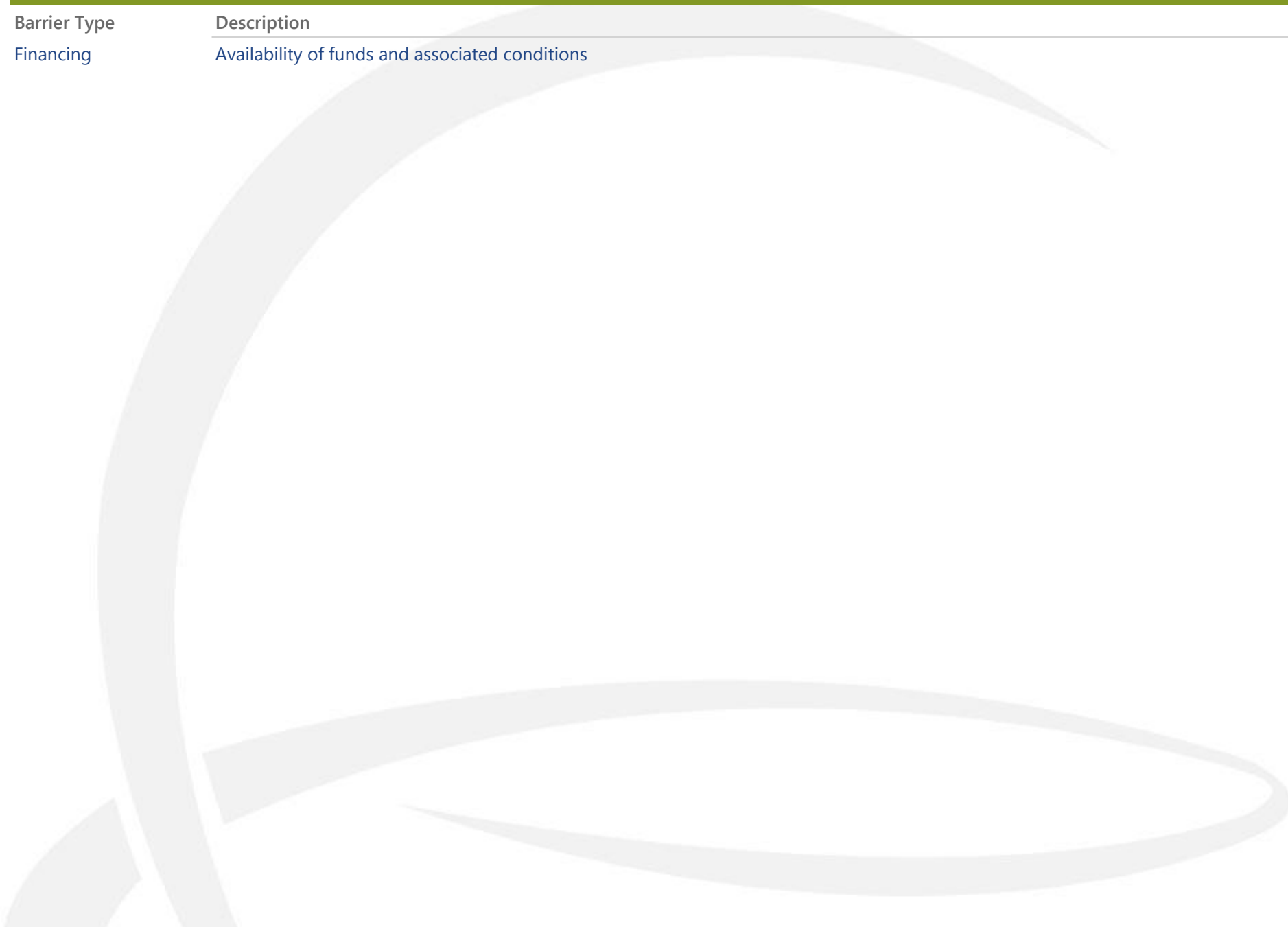
| | |
|--------------------------------------|--|
| PCI Benefits | Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity |
| General Criteria Fulfilled | Yes |
| Specific Criteria Fulfilled | Competition, Market Integration, Security of Supply, Sustainability |
| Specific Criteria Fulfilled Comments | The projects also target increased regional cooperation and have a strong focus on consumers and vulnerable energy customers. The aim is to move to Finnish-Baltic single entry-exit zone, which has been identified as the best fit solution in the "Baltic regional gas market study". |

Benefits

| | |
|-------------------------|--|
| Main Driver | Regulation-Interoperability |
| Main Driver Explanation | Main project driver is the operational link with the Balticconnector project |
| Benefit Description | |

Barriers

| Barrier Type | Description |
|--------------|---|
| Financing | Availability of funds and associated conditions |



Balticconnector Finnish part

| TRA-N-928 | Project | Pipeline including CS | Non-FID |
|--|---|-----------------------|----------|
| Update Date | 24/05/2016 | | Advanced |
| Description | New bidirectional offshore pipeline (Inkoo-Paldiski, DN500, 80 bar) of 80 km, plus 50 km onshore pipeline in EE (Kiili-Paldiski pipeline, DN 700, 55 bar) and 20 km onshore pipeline in FI (Siuntio-Inkoo pipeline, DN500, 80 bar) including metering and compressor stations at both ends with a daily nominal capacity of 7.2 mcm/day. The power of each compressor station is about 10 MW. | | |
| Regulatory Decisions and similar material conditions | The Regulators of Finland (Energiavirasto) and Estonia (Konkurentsiamet) have made a common CBCA decision for the Balticconnector and Estonia-Latvia interconnection project. | | |

Capacity Increments Variant For Modelling

| Point | Operator | Year | From Gas System | To Gas System | Capacity |
|---------------------------------|---------------------|------|-----------------|---------------|------------|
| Balticconnector / Siuntio (FI) | Baltic Connector Oy | 2019 | FI | FI/BAC | 79.0 GWh/d |
| | Baltic Connector Oy | 2019 | FI/BAC | FI | 79.0 GWh/d |
| Balticconnector / Paldiski (EE) | Baltic Connector Oy | 2019 | EE | FI/BAC | 79.0 GWh/d |
| | Baltic Connector Oy | 2019 | FI/BAC | EE | 79.0 GWh/d |

| Sponsors | | General Information | |
|---|------|-----------------------------|-----------------------------|
| EE Kiili pressure reduction station | | Promoter | <i>Baltic Connector Oy</i> |
| Elering AS | 100% | Operator | <i>Baltic Connector Oy</i> |
| EE Kiili-Paldiski pipeline | | Host Country | <i>Finland</i> |
| Elering AS | 100% | Status | <i>Planned</i> |
| EE Paldiski metering and Compressor station | | Website | <u><i>Project's URL</i></u> |
| Elering AS | 100% | Publication Approval Status | <i>Approved</i> |
| FI Inkoo metering and compressor station | | | |
| Baltic Connector OY | 100% | | |
| FI Inkoo-Siuntio pipeline | | | |
| Baltic Connector OY | 100% | | |
| FI-EE Inkoo-Paldiski Offshore pipeline | | | |
| Baltic Connector OY | 50% | | |

Financing



1

Barriers (Count)

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | | |
|--------------------------------|---|------------------|------------|----------------|---------------------------|------------------------------|---------------------|
| Part of NDP | <i>No (The national Natural Gas Market legislation does not set system operators any obligation to draw up and publish a NDP)</i> | Pre-Feasibility | | <i>12/2005</i> | Considered TPA Regime | <i>Regulated</i> | |
| | | Feasibility | | <i>01/2006</i> | <i>12/2006</i> | Considered Tariff Regime | <i>Regulated</i> |
| | | FEED | | <i>01/2016</i> | <i>02/2016</i> | Applied for Exemption | <i>No</i> |
| NDP Number | | Market Test | | | <i>03/2016</i> | Exemption Granted | <i>Not Relevant</i> |
| | | Permitting | | <i>12/2012</i> | <i>01/2018</i> | | |
| Currently PCI | <i>Yes (8.1.1)</i> | Supply Contracts | | | | Exemption in entry direction | <i>0.00%</i> |
| | | FID | | | <i>09/2016</i> | Exemption in exit direction | <i>0.00%</i> |
| CBCA Decision Market Survey | <i>Yes (2016-04-22)</i> <i>Other(2016-03-09)</i> | Construction | | <i>11/2016</i> | <i>12/2019</i> | | |
| | | Commissioning | | <i>2019</i> | <i>2019</i> | | |

Pipelines and Compressor Stations

| Pipeline Section | Pipeline Comment | Diameter (mm) | Length (km) | Compressor Power (MW) |
|------------------|--|---------------|-------------|-----------------------|
| EE Onshore | Kiili-Paldiski onshore pipeline, Paldiski compressor station | 500 | 50 | 10 |
| FI Onshore | Inkoo-Siuntio pipeline, Inkoo compressor station | 500 | 20 | 10 |
| Offshore | Inkoo-Paldiski offshore pipeline | 700 | 80 | |
| Total | | | 150 | 20 |

PCI Details

| | |
|--------------------------------------|---|
| PCI Benefits | Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity |
| General Criteria Fulfilled | No |
| Specific Criteria Fulfilled | Competition, Market Integration, Security of Supply, Sustainability |
| Specific Criteria Fulfilled Comments | The purpose of the Balticconnector natural gas pipeline project is to interconnect the Finnish and Estonian natural gas transmission networks and improve the energy security of the Baltic-Finnish region. The integration of the Finnish and Estonian gas infrastructures will ensure a more coherent and diverse natural gas transmission network in the Baltic Sea region, guarantee the security of natural gas supply for the north-eastern Member States of the EU by lifting Finland out of the current energy isolation and enhance EU energy solidarity by providing needed technical implementations for energy independence. The projects also target increased regional cooperation and have a strong focus on consumers and vulnerable energy customers. The aim is to move to Finnish-Baltic single entry-exit zone, which has been identified as the best fit solution in the "Baltic regional gas market study". |

Time Schedule

| | |
|------------------------|------------|
| Grant Obtention Date | 17/04/2015 |
| Delay Since Last TYNDP | |
| Delay Explanation | |

Expected Gas Sourcing

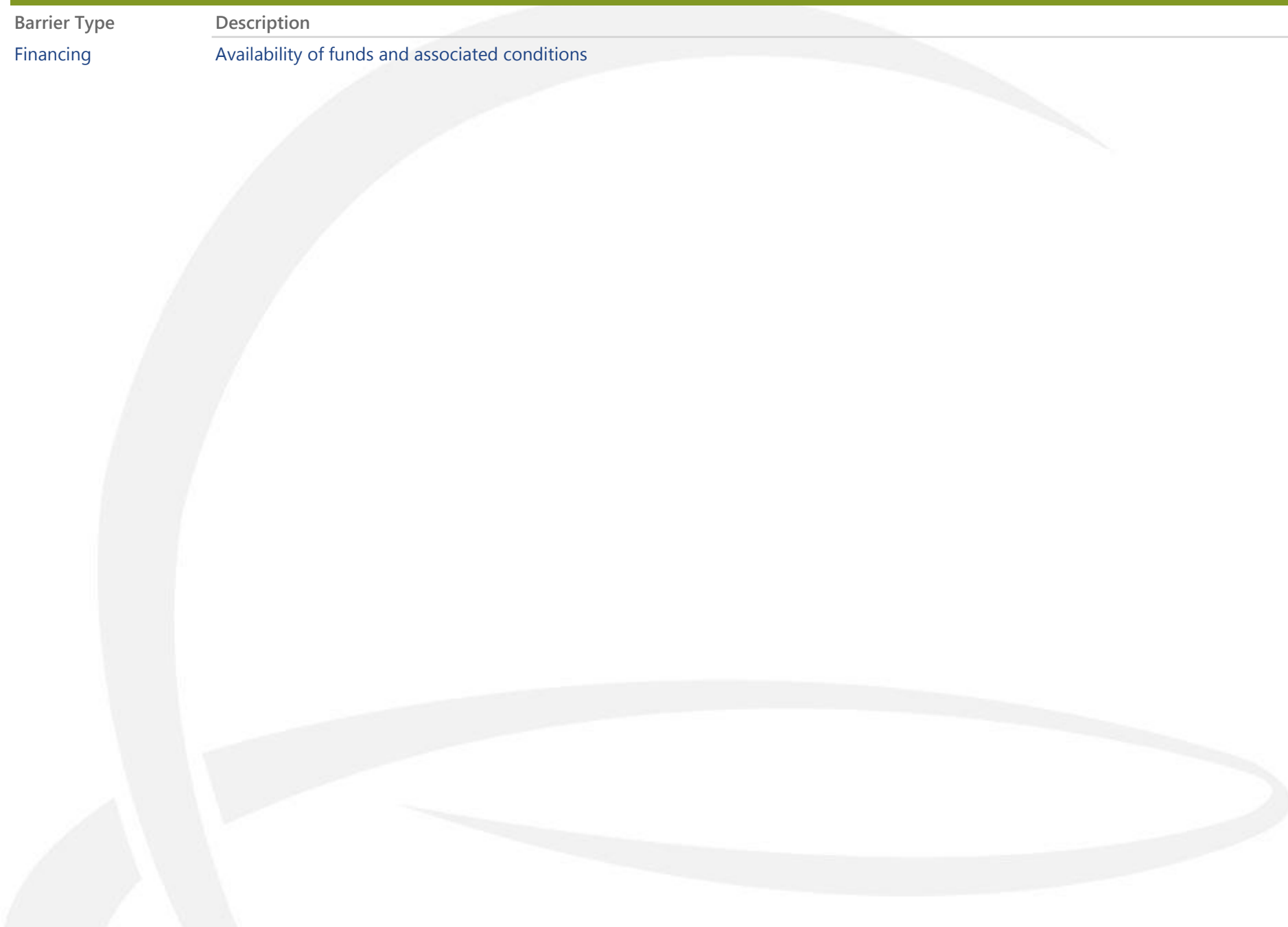
Russia, Central Europe

Benefits

| | |
|-------------------------|--|
| Main Driver | Regulation-Interoperability |
| Main Driver Explanation | Balticconnector will lift Finland out of the current energy isolation and will provide Finland an opportunity to join in the European single gas market and to terminate the derogations on the EU gas market legislation. |
| Benefit Description | Project has several qualitative and quantitative benefits, such as increase in energy security, price convergence in the region, development of the energy market etc. |

Barriers

| Barrier Type | Description |
|--------------|---|
| Financing | Availability of funds and associated conditions |



Enhancement of Incukalns UGS

| | | | |
|---|--|-------------------------|-----------------|
| UGS-N-374 | Project | Storage Facility | Non-FID |
| Update Date | 28/04/2016 | | Advanced |
| Description | <p>The Incukalns Underground Gas Storage facility is the only gas storage of the East-Baltic region located within the EU. Reliable operation of Incukalns UGS is essential for the whole East-Baltic Region because considerable amount of gas in the region is used for heating, therefore, winter and summer consumption figures differ few times, and the storage is used for meeting of gas demand during the heating season. Analysis of gas flows in the East-Baltic region carried out jointly by TSOs showed that daily withdrawal capacity of Incukalns UGS shall be increased, and especially it is important in the end of withdrawal season when currently withdrawal capacity drops significantly. After completion of enhancement of Incukalns UGS, increase of withdrawal capacity will have significant positive impact on efficiency of operation of the whole East-Baltic joined gas system and will increase security of supply. After construction of GIPL pipeline and Balticconnector the market area for Incukalns</p> | | |
| Regulatory Decisions and similar material conditions | | | |

Capacity Increments Variant For Modelling

| Point | Operator | Year | From Gas System | To Gas System | Capacity |
|--------------------|---------------|------|-----------------|---------------|------------|
| UGS Incukalns (LV) | Latvijas Gaze | 2019 | STcLV | LV | 30.0 GWh/d |
| | Latvijas Gaze | 2021 | STcLV | LV | 20.0 GWh/d |

| Sponsors | General Information | | | | Barriers (Count) |
|---|-----------------------------|-------------------------------|-----------|---|------------------|
| JSC "Latvijas Gaze" 100% | Promoter | JSC "Latvijas Gaze" | | | |
| | Operator | Latvijas Gaze | Market | 1 | |
| | Host Country | Latvia | | | |
| | Status | Planned | Financing | 1 | |
| | Website | Project's URL | | | |
| | Publication Approval Status | Approved | | | |

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | |
|-------------------------|---|------------------|------------|----------|------------------------------|------------------|
| Part of NDP | <i>No (National developmeny plan for 2014-2020 does not specify particular projects, however, under Activity "Energy efficiency and energy production" item "7. Development of enery infrastructure networks" may include the project.)</i> | Pre-Feasibility | | | Considered TPA Regime | <i>Regulated</i> |
| | | Feasibility | 10/2011 | 02/2012 | Considered Tariff Regime | <i>Regulated</i> |
| | | FEED | | | Applied for Exemption | <i>No</i> |
| | | Market Test | | | Exemption Granted | <i>No</i> |
| NDP Number | | Permitting | 05/2014 | | | |
| Currently PCI | Yes (8.2.4) | Supply Contracts | | | Exemption in entry direction | 0.00% |
| | | FID | | | Exemption in exit direction | 0.00% |
| CBCA Decision | Yes (2014-04-30) | Construction | 03/2014 | | | |
| Market Survey | Other(2014-01-17) | Commissioning | 2019 | 2021 | | |

Technical Information (UGS)

| | | |
|-----------------------|--|--|
| Storage Facility | <i>Incukalns Underground Gas Storage</i> | |
| Storage Facility Type | <i>Aquifer</i> | |
| Multiple-Cycle | <i>No</i> | |
| Working Volume (mcm) | <i>0.00</i> | <i>Depending on market needs the increment can reach 900 mcm</i> |

PCI Details

| | |
|--------------------------------------|---|
| PCI Benefits | Project aims at fulfilling the infrastructure standard (N-1) rule at regional level in accordance with Article 6(3) of Regulation EU, Project aims at supplying directly or indirectly at least two Member States |
| General Criteria Fulfilled | Yes |
| Specific Criteria Fulfilled | Competition, Market Integration, Security of Supply, Sustainability |
| Specific Criteria Fulfilled Comments | Project is extremely important for security of supply for the whole East-Baltic region and together with the other complimentary projects contributes to market integration, sustainability and competition |

Time Schedule

| | |
|------------------------|-----------|
| Grant Obtention Date | |
| Delay Since Last TYNDP | Two years |

Delay Explanation Lack of financing

Expected Gas Sourcing

Russia, LNG ()

Benefits

| | |
|-------------------------|--|
| Main Driver | Market Demand |
| Main Driver Explanation | East-Baltic TSOs joint analysis. Other important driver is security of supply determined by the joint risk assessment of Lithuania, Latvia and Estonia. After competition of GIPL and Balticconnector it is expected that market area for the storage will also include Poland and Finland |
| Benefit Description | The major benefit of the project is improvement of the security of supply for the East-Baltic region in case of gas supply disruption. In addition, jointly together with other gas infrastructure projects in the Baltic region (Intra-Baltic Connections, GIPL, Balticconnector and LNG terminal in the Gulf of Finland, Klaipeda LNG terminal) the project increases security of gas supply to the consumers by contributing into diversification of gas supply sources and routes, as well as integrating gas networks of the Baltic countries and Finland into the common EU gas network. It also provides possibility to optimize the gas flows in the East-Baltic region by offering required volumes of gas for business purposes and in case of emergency and contributes towards creation of a liquid gas market in the East-Baltic region and possibility to be used as a gas hub for the whole region. |

Barriers

| Barrier Type | Description |
|--------------|---|
| Market | Lack of market support |
| Financing | Availability of funds and associated conditions |

Gas Interconnection Poland-Lithuania (GIPL) (Lithuania's section)

| | | | |
|--|---|------------------------------|----------------|
| TRA-N-341 | Project | Pipeline including CS | Non-FID |
| Update Date | 06/05/2016 | | Advanced |
| Description | The project is aimed to establish a well-functioning new bidirectional interconnection between the Polish and Lithuanian gas transmission systems to integrate the isolated gas markets of the Baltic States into the EU gas grid, by introducing an alternative gas supply route to the Baltic States. By implementing the project a 165 km-long and 700 mm-diameter pipeline and gas pressure reduction and metering station will be constructed on Lithuania's side. | | |
| Regulatory Decisions and similar material conditions | On 11 August 2014 ACER adopted a decision No 01/2014 On The Investment Request including Cross-Border Cost Allocation for The Gas Interconnection Poland-Lithuania Project of Common Interest No. 8.5. | | |

Capacity Increments Variant For Modelling

| Point | Operator | Year | From Gas System | To Gas System | Capacity |
|----------------------|---------------|------|-----------------|---------------|------------|
| Interconnector PL-LT | AB Amber Grid | 2019 | LT | PL | 51.1 GWh/d |
| | AB Amber Grid | 2019 | PL | LT | 73.9 GWh/d |

| Sponsors | General Information | Barriers (Count) |
|---|---|---------------------|
| AB Amber Grid 100% | Promoter <i>AB Amber Grid</i> Operator <i>AB Amber Grid</i> Host Country <i>Lithuania</i> Status <i>Planned</i> Website <i>Project's URL</i> Publication Approval Status <i>Approved</i> | No Barriers Defined |

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | |
|-------------------------|--|--------------------------|--------------|----------|-----------------------------|------------------------------|
| Part of NDP | <i>Yes (Ten-year Network Development Plan 2014-2023)</i> | Pre-Feasibility | | 12/2012 | Considered TPA Regime | <i>Regulated</i> |
| | | Feasibility | 02/2012 | 02/2013 | Considered Tariff Regime | <i>Regulated</i> |
| NDP Number | <i>n/a</i> | FEED | 05/2015 | 09/2016 | Applied for Exemption | <i>No</i> |
| | | Market Test | | | 09/2012 | Exemption Granted |
| Currently PCI | <i>Yes (8.5)</i> | Permitting | 07/2016 | 09/2016 | | |
| | | Supply Contracts | | | 09/2017 | Exemption in entry direction |
| CBCA Decision | <i>Yes (2014-08-11)</i> | FID | | 10/2016 | Exemption in exit direction | <i>0.00%</i> |
| Market Survey | | <i>Other(2012-09-21)</i> | Construction | 10/2016 | 06/2019 | |
| | | Commissioning | 2019 | 2019 | | |

Pipelines and Compressor Stations

| Pipeline Section | Pipeline Comment | Diameter (mm) | Length (km) | Compressor Power (MW) |
|--------------------------|------------------|---------------|-------------|-----------------------|
| Border PL/LT - Jauniunai | | 700 | 165 | |
| Total | | | 165 | |

PCI Details

| | |
|--------------------------------------|---|
| PCI Benefits | Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity |
| General Criteria Fulfilled | Yes |
| Specific Criteria Fulfilled | Competition, Market Integration, Security of Supply, Sustainability |
| Specific Criteria Fulfilled Comments | |

Time Schedule

| | |
|------------------------|------------|
| Grant Obtention Date | 15/10/2015 |
| Delay Since Last TYNDP | |
| Delay Explanation | |

Benefits

| | |
|-------------------------|---------------|
| Main Driver | Market Demand |
| Main Driver Explanation | |

Benefit Description



Gas Interconnection Poland-Lithuania (GIPL) - PL section

| | | | |
|--|---|------------------------------|----------------|
| TRA-N-212 | Project | Pipeline including CS | Non-FID |
| Update Date | 19/05/2016 | | Advanced |
| Description | <p>GIPL aims to connect the gas transmission systems in Poland and Lithuania and, consequently, enable the integration of the isolated gas markets in the Baltic States (and Finland) with the Polish and EU gas markets. This will contribute to the creation of a regional gas market, enhancement of competition and the security of gas supply. The project will also provide an access to the global LNG market for the Baltic States via the LNG terminal in Świnoujście. The construction of GIPL, except the above benefits for security and diversification of gas supplies in the Baltic region, will also allow to connect the Baltic States with the CEE countries, thus providing strategic link between the BEMIP and North-South East priority corridors. As part of the project implementation on the Polish side, it is foreseen to construct the pipeline between Holowczyce and PL-LT border and construct CS Gustorzyn. The commissioning year of the project has been moved to 2021.</p> | | |
| Regulatory Decisions and similar material conditions | | | |

Capacity Increments Variant For Modelling

| Point | Operator | Year | From Gas System | To Gas System | Capacity |
|----------------------|-----------------|------|-----------------|---------------|------------|
| Interconnector PL-LT | GAZ-SYSTEM S.A. | 2019 | LT | PL | 51.1 GWh/d |
| | GAZ-SYSTEM S.A. | 2019 | PL | LT | 73.9 GWh/d |

| Sponsors | | General Information | | Barriers (Count) | |
|---------------------------|----------------------|-----------------------------|----------------------|------------------|---|
| Lithuanian section | | Promoter | GAZ-SYSTEM S.A. | Political | 1 |
| AB Amber Grid | 100% | Operator | GAZ-SYSTEM S.A. | Permit Granting | 1 |
| Polish section | | Host Country | Poland | Others | 1 |
| Gas Transmission Operator | GAZ-SYSTEM S.A. 100% | Status | Planned | Market | 1 |
| | | Website | <u>Project's URL</u> | | |
| | | Publication Approval Status | Approved | | |

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | |
|-------------------------|---|--------------------------------|----------------|----------------|------------------------------|---------------------|
| Part of NDP | <i>Yes (Network Development Plan 2016-2025)</i> | Pre-Feasibility | | | Considered TPA Regime | <i>Regulated</i> |
| | | Feasibility | | | Considered Tariff Regime | <i>Regulated</i> |
| NDP Number | <i>N/A</i> | FEED | <i>01/2014</i> | <i>01/2017</i> | Applied for Exemption | <i>No</i> |
| Currently PCI | | Market Test | | | Exemption Granted | <i>Not Relevant</i> |
| | <i>Yes (8.5)</i> | Permitting | | <i>01/2017</i> | | |
| | | Supply Contracts | | | Exemption in entry direction | <i>0.00%</i> |
| CBCA Decision | <i>Yes (2014-08-11)</i> | FID | | <i>01/2017</i> | Exemption in exit direction | <i>0.00%</i> |
| Market Survey | | <i>Open Season(2013-09-21)</i> | Construction | <i>01/2017</i> | <i>01/2019</i> | |
| | | Commissioning | <i>2019</i> | <i>2019</i> | | |

Pipelines and Compressor Stations

| Pipeline Section | Pipeline Comment | Diameter (mm) | Length (km) | Compressor Power (MW) |
|-----------------------|--|---------------|-------------|-----------------------|
| CS Gustorzyn | Redundancy not included | | | 16 |
| GIPL - Polish section | The pipeline will connect to existing CS in Holowczyce. Routing and length subject to studies. | 700 | 357 | |
| Total | | | 357 | 16 |

PCI Details

| | |
|--------------------------------------|---|
| PCI Benefits | Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity |
| General Criteria Fulfilled | Yes |
| Specific Criteria Fulfilled | Competition, Market Integration, Security of Supply, Sustainability |
| Specific Criteria Fulfilled Comments | |

Time Schedule

| | |
|------------------------|---|
| Grant Obtention Date | |
| Delay Since Last TYNDP | <i>N/A</i> |
| Delay Explanation | <i>GAZ-SYSTEM encountered a number of problems mainly regarding the extension of CS Rembelszczyzna. These issues concern permitting and environmental aspects. They significantly undermine the implementation of the project according to the previous time schedule. Due to the significance of the project GAZ-SYSTEM proposed a new routing of the pipeline in Poland. The reason for changing the routing is to strenghten the engineering and technical aspects of the project and to commission the project with a shortest possible delay when compared to the implementation of GIPL in the base scenario.</i> |

North - South Gas Corridor in Western Poland

| | | | |
|--|---|------------------------------|----------------|
| TRA-N-247 | Project | Pipeline including CS | Non-FID |
| Update Date | 06/05/2016 | | Advanced |
| Description | <p>The investment tasks within the project constitute essential elements of the planned North-South gas interconnections in Central-Eastern Europe. The corridor covers Western Poland and it is planned to be connected to PL-CZ interconnection. Implementation of the investment tasks within this project will allow for exploiting full potential of gas transmission from LNG terminal Świnoujście and Baltic Pipe through the North-South gas corridor to other CEE countries. This infrastructure will be used for purposes of PL-CZ and PL-SK interconnections. It will also enable the possibility of gas transmission to Ukraine. The investment tasks are planned to be commissioned in 2018.</p> | | |
| Regulatory Decisions and similar material conditions | | | |

| Capacity Increments Variant For Modelling | | | | | |
|---|-----------------|------|-----------------|---------------|-----------|
| Point | Operator | Year | From Gas System | To Gas System | Capacity |
| Aggregated Distribution (PL) | GAZ-SYSTEM S.A. | 2019 | DScPL | PL | 0.0 GWh/d |

| Sponsors | | General Information | | Barriers (Count) | |
|---------------------------|----------------------|-----------------------------|-------------------------------|------------------|---|
| Gas Transmission Operator | GAZ-SYSTEM S.A. 100% | Promoter | GAZ-SYSTEM S.A. | Permit Granting | 1 |
| | | Operator | GAZ-SYSTEM S.A. | Others | 1 |
| | | Host Country | Poland | | |
| | | Status | Planned | | |
| | | Website | Project's URL | | |
| | | Publication Approval Status | Approved | | |

Enabled Projects

| Project Code | Project Name |
|--------------|--|
| TRA-N-275 | Poland - Slovakia interconnection (PL section) |
| TRA-N-273 | Poland - Czech Republic interconnection (PL section) |

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | |
|-------------------------|---|--|----------------|----------------|------------------------------|---------------------|
| Part of NDP | <i>Yes (Network Development Plan 2016-2025)</i> | Pre-Feasibility | | | Considered TPA Regime | <i>Regulated</i> |
| | | Feasibility | | | Considered Tariff Regime | <i>Regulated</i> |
| NDP Number | <i>N/A</i> | FEED | <i>01/2013</i> | <i>01/2017</i> | Applied for Exemption | <i>No</i> |
| Currently PCI | | Market Test | | | Exemption Granted | <i>Not Relevant</i> |
| | <i>Yes (6.1.2)</i> | Permitting | | <i>01/2017</i> | | |
| | | Supply Contracts | | | Exemption in entry direction | <i>0.00%</i> |
| CBCA Decision | <i>No</i> | FID | | | Exemption in exit direction | <i>0.00%</i> |
| Market Survey | | <i>Not Relevant (no CBCA decision)</i> | Construction | <i>01/2017</i> | <i>01/2019</i> | |
| | | Commissioning | <i>2019</i> | <i>2019</i> | | |

Pipelines and Compressor Stations

| Pipeline Section | Pipeline Comment | Diameter (mm) | Length (km) | Compressor Power (MW) |
|----------------------------------|------------------|---------------|-------------|-----------------------|
| Lwówek-Odolanow pipeline | | 1,000 | 162 | |
| Odolanow compressor station | | | | 20 |
| Tworóg-Kędzierzyn Koźle pipeline | | 1,000 | 43 | |
| Total | | | 205 | 20 |

PCI Details

| | |
|--------------------------------------|---|
| PCI Benefits | Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity |
| General Criteria Fulfilled | Yes |
| Specific Criteria Fulfilled | Competition, Market Integration, Security of Supply, Sustainability |
| Specific Criteria Fulfilled Comments | |

Expected Gas Sourcing

Caspian Region, Norway, Russia, LNG ()

Benefits

| | |
|-------------------------|---|
| Main Driver | <u>Others</u> |
| Main Driver Explanation | The project is driven by SoS and market demand considerations |

Benefit Description Implementation of the investment tasks within this project will allow for ensuring full functionality of PL-CZ and PL-SK interconnections. This project will have an impact on: enhancing functionality of transmission system in Central and Southern Poland in order to facilitate better operational functioning of the upgraded PL-CZ interconnection and to initiate gas flow on the planned PL-SK interconnection; increasing the security of supply sources, routes and counterparts, as well as on providing an overall flexibility for the CEE region; improving European gas grid interconnections; creating a well-functioning internal market in the CEE region by ensuring high reliability of the cross-border transmission between Poland, the Czech Republic and Slovakia.

Barriers

| Barrier Type | Description |
|-----------------|--|
| Permit Granting | Efficient permitting procedures are necessary for timely implementation of the Project. |
| Others | Due to the project drivers which are mainly related to SoS in Central-Eastern Europe, the project does not meet the criterion of economic viability, so the external co-financing is indispensable. Lack of external financial support may be a serious barrier in implementation. |

Poland - Czech Republic interconnection (PL section)

| TRA-N-273 | Project | Pipeline including CS | Non-FID |
|--|---|-----------------------|----------|
| Update Date | 09/05/2016 | | Advanced |
| Description | <p>The project aims to increase the cross-border capacity between Poland and the Czech Republic by establishing a large transportation corridor that will allow for flexible transport of gas in Central-Eastern Europe within the North-South corridor. The development of the physical interconnection between Poland and the Czech Republic will contribute to reinforcement of the effective operation of the gas transmission systems, efficient gas exchange between the markets, as well as increase of the security of supply not only for Poland and the Czech Republic, but also for the CEE region by enabling the supply link with other European gas market and global LNG market via the terminal in Świnoujście. The project consists of Poland-Czech Republic Interconnector (STORK II) and internal transmission projects in Poland and in the Czech Republic. Detailed information on these projects is provided in subsequent sections in the project questionnaire.</p> | | |
| Regulatory Decisions and similar material conditions | | | |

Capacity Increments Variant For Modelling

| Point | Operator | Year | From Gas System | To Gas System | Capacity |
|-------|-----------------|------|-----------------|---------------|-------------|
| Hať | GAZ-SYSTEM S.A. | 2019 | CZ | PL | 219.1 GWh/d |
| | GAZ-SYSTEM S.A. | 2019 | PL | CZ | 153.2 GWh/d |

| Sponsors | | General Information | | Barriers (Count) | |
|---------------------------|----------------------|-----------------------------|-------------------------------|------------------|---|
| Czech section | | Promoter | GAZ-SYSTEM S.A. | Political | 1 |
| NET4GAS, s.r.o. | 100% | Operator | GAZ-SYSTEM S.A. | Permit Granting | 1 |
| Polish section | | Host Country | Poland | Others | 1 |
| Gas Transmission Operator | GAZ-SYSTEM S.A. 100% | Status | Planned | | |
| | | Website | Project's URL | | |
| | | Publication Approval Status | Approved | | |

Enabled Projects

| Project Code | Project Name |
|--------------|--|
| TRA-N-247 | North - South Gas Corridor in Western Poland |

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | |
|-------------------------|---|------------------|----------------|----------------|------------------------------|---------------------|
| Part of NDP | <i>Yes (Network Development Plan 2016-2025)</i> | Pre-Feasibility | | | Considered TPA Regime | <i>Regulated</i> |
| | | Feasibility | | | Considered Tariff Regime | <i>Regulated</i> |
| NDP Number | <i>N/A</i> | FEED | <i>01/2012</i> | <i>01/2017</i> | Applied for Exemption | <i>No</i> |
| | | Market Test | | | Exemption Granted | <i>Not Relevant</i> |
| Currently PCI | <i>Yes (6.1.1, 6.1.2)</i> | Permitting | | <i>01/2017</i> | | |
| | | Supply Contracts | | | Exemption in entry direction | <i>0.00%</i> |
| CBCA Decision | <i>Yes (2014-06-24)</i> | FID | | <i>01/2017</i> | Exemption in exit direction | <i>0.00%</i> |
| Market Survey | <i>Other(2012-04-24)</i> | Construction | <i>01/2017</i> | <i>01/2019</i> | | |
| | | Commissioning | <i>2019</i> | <i>2019</i> | | |

Pipelines and Compressor Stations

| Pipeline Section | Pipeline Comment | Diameter (mm) | Length (km) | Compressor Power (MW) |
|--|------------------|---------------|-------------|-----------------------|
| CS Kedzierzyn | | | | 30 |
| Czeszow-Kielczow pipeline | | 1,000 | 32 | |
| Czeszow-Wierzchowice pipeline | | 1,000 | 14 | |
| Kedzierzyn node | | | | |
| PL-CZ interconnection - Polish section | | 1,000 | 54 | |
| Zdzieszowice-Kędzierzyn pipeline | | 1,000 | 19 | |
| Zdzieszowice-Wrocław pipeline | | 1,000 | 130 | |
| Total | | | 249 | 30 |

PCI Details

| | |
|--------------------------------------|---|
| PCI Benefits | Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity |
| General Criteria Fulfilled | Yes |
| Specific Criteria Fulfilled | Competition, Market Integration, Security of Supply, Sustainability |
| Specific Criteria Fulfilled Comments | |

Expected Gas Sourcing

Caspian Region, Norway, Russia, LNG ()

Benefits

| | |
|-------------------------|---|
| Main Driver | Others |
| Main Driver Explanation | Regulation SoS and market integration |
| Benefit Description | Implementation of PL-CZ interconnection will have an impact on: increasing the security of gas supply, providing overall flexibility for the CEE region and diversifying the supply routes for the CEE region; improving European gas grid interconnection; increasing the security and reliability of the cross-border gas transmission between the Czech Republic and Poland (fulfilment of N-1 rule in Poland); creating a robust, well-functioning internal market in the Czech Republic and Poland and promoting the competition; contributing to the creation of an integrated and competitive gas market in the CEE region; establishing adequate technical conditions necessary to cover the forecasted growth of the gas demand in Poland based on the development of the power generation sector and possible leverage for market coupling potential in Central-Eastern Europe. |

Barriers

| Barrier Type | Description |
|-----------------|--|
| Permit Granting | Efficient permitting procedures are necessary for timely implementation of the project. |
| Political | Due to the project drivers which are mainly related to SoS in Central-Eastern Europe, the project does not meet the criterion of economic viability, so the external co-financing is indispensable. Lack of external financial support may be a serious barrier in implementation. |
| Others | Due to the project drivers which are mainly related to SoS in Central-Eastern Europe, the project does not meet the criterion of economic viability, so the external co-financing is indispensable. Lack of external financial support may be a serious barrier in implementation. |

Poland - Slovakia interconnection (PL section)

| | | | |
|--|---|------------------------------|----------------|
| TRA-N-275 | Project | Pipeline including CS | Non-FID |
| Update Date | 06/05/2016 | | Advanced |
| Description | The main goal of the project is to create an important part of the North-South gas interconnections in Central-Eastern Europe by implementing a missing interconnection between the transmission systems in Poland and Slovakia and, thus, increase the security of gas supplies in Central-Eastern Europe through the diversification of supply sources and routes, as well as integration of Sub-Carpathian Market Area and enhancing market functionality. The project consists of Poland-Slovakia interconnector and relevant internal transmission investments in Poland and in Slovakia to ensure full functionality of the interconnection. Detailed information on these projects is provided in subsequent section in the project questionnaire. | | |
| Regulatory Decisions and similar material conditions | | | |

Capacity Increments Variant For Modelling

| Point | Operator | Year | From Gas System | To Gas System | Capacity |
|------------------------|-----------------|------|-----------------|---------------|-------------|
| Interconnector PL - SK | GAZ-SYSTEM S.A. | 2019 | PL | SK | 143.9 GWh/d |
| | GAZ-SYSTEM S.A. | 2019 | SK | PL | 174.5 GWh/d |

| Sponsors | | General Information | | Barriers (Count) | |
|---------------------------|----------------------|-----------------------------|-------------------------------|------------------|---|
| Polish section | | Promoter | GAZ-SYSTEM S.A. | Political | 1 |
| Gas Transmission Operator | GAZ-SYSTEM S.A. 100% | Operator | GAZ-SYSTEM S.A. | Permit Granting | 1 |
| Slovak section | | Host Country | Poland | Others | 1 |
| eustream, a.s. | 100% | Status | Planned | | |
| | | Website | Project's URL | | |
| | | Publication Approval Status | Approved | | |

Enabled Projects

| Project Code | Project Name |
|--------------|--|
| TRA-N-245 | North - South Gas Corridor in Eastern Poland |
| TRA-N-247 | North - South Gas Corridor in Western Poland |

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | |
|-------------------------|--|------------------|------------|----------|------------------------------|--------------|
| Part of NDP | Yes (Network Development Plan 2016-2025) | Pre-Feasibility | | | Considered TPA Regime | Regulated |
| | | Feasibility | | | Considered Tariff Regime | Regulated |
| NDP Number | N/A | FEED | 01/2014 | 01/2017 | Applied for Exemption | No |
| | | Market Test | | | Exemption Granted | Not Relevant |
| Currently PCI | Yes (6.2.1, 6.2.3) | Permitting | | 01/2017 | | |
| | | Supply Contracts | | | Exemption in entry direction | 0.00% |
| CBCA Decision | Yes (2014-11-28) | FID | | 01/2017 | Exemption in exit direction | 0.00% |
| Market Survey | Open Season(2016-07-01) | Construction | 01/2017 | 12/2019 | | |
| | | Commissioning | 2019 | 2019 | | |

Pipelines and Compressor Stations

| Pipeline Section | Pipeline Comment | Diameter (mm) | Length (km) | Compressor Power (MW) |
|--|------------------|---------------|-------------|-----------------------|
| PL-SK interconnection - Polish section | | 1,000 | 58 | 19 |
| Pogórska Wola - Tworzeń pipeline | | 1,000 | 160 | |
| Strachocina - Pogórska Wola | | 1,000 | 98 | |
| Tworóg - Tworzeń | | 1,000 | 56 | |
| Total | | | 372 | 19 |

PCI Details

| | |
|--------------------------------------|---|
| PCI Benefits | Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity |
| General Criteria Fulfilled | Yes |
| Specific Criteria Fulfilled | Competition, Market Integration, Security of Supply, Sustainability |
| Specific Criteria Fulfilled Comments | |

Time Schedule

| | |
|------------------------|------------|
| Grant Obtention Date | 29/10/2014 |
| Delay Since Last TYNDP | |
| Delay Explanation | |

Expected Gas Sourcing

Caspian Region, Russia, LNG ()

Benefits

| | |
|-------------------------|--|
| Main Driver | Others |
| Main Driver Explanation | Increase of SoS in the CEE region. Integration of gas infrastructure in the CEE region by constructing a cross-border interconnection between PL and SK that is currently missing. |
| Benefit Description | Implementation of PL-SK interconnection will have an impact on: creating the cross-border capacity between Poland and Slovakia by establishing a large transportation corridor that will allow for flexible transport of gas in Central Europe within the North-South axis; increasing the security of gas supply and diversification of supply routes for the CEE region; improving European gas grid interconnection; increasing the security and reliability of the cross-border gas transmission between Slovakia and Poland (contribution to N-1 standard in Poland and Slovakia); creating a robust, well-functioning internal market in Slovakia and Poland and promote the competition; establishing adequate technical conditions necessary to cover the forecasted growth of the gas demand in Poland based on the development of the power generation sector and possible leverage for market coupling potential in Central-Eastern Europe. |

Barriers

| Barrier Type | Description |
|-----------------|--|
| Permit Granting | Efficient permitting procedures are necessary for timely implementation of the Project. |
| Political | Due to the project drivers which are mainly related to SoS in Central-Eastern Europe, the project does not meet the criterion of economic viability, so the external co-financing is indispensable. Lack of external financial support may be a serious barrier in implementation. |
| Others | Due to the project drivers which are mainly related to SoS in Central-Eastern Europe, the project does not meet the criterion of economic viability, so the external co-financing is indispensable. Lack of external financial support may be a serious barrier in implementation. |

Intergovernmental Agreements

| Agreement | Agreement Description | Is Signed | Agreement Signature Date |
|---|-----------------------|-----------|--------------------------|
| Agreement between the Government of the Republic of Poland and the Government of the Slovak Republic for cooperation on the implementation of the project of a gas pipeline connecting the Polish transmission system and Slovak transmission system. | In Comments | Yes | 11/06/2014 |

Paldiski LNG Terminal

| | | | |
|--|---|---------------------|----------------|
| LNG-N-079 | Project | LNG Terminal | Non-FID |
| Update Date | 23/05/2016 | | Advanced |
| Description | LNG import and regasification terminal for regional use on the Pakri peninsula on the Eastern coast of the Baltic Sea | | |
| Regulatory Decisions and similar material conditions | | | |

| Capacity Increments Variant For Modelling | | | | | |
|--|----------------|------|-----------------|---------------|-------------------|
| Point | Operator | Year | From Gas System | To Gas System | Capacity |
| Paldiski LNG | Balti Gaas plc | 2020 | LNG_Tk_EE | EE | 37.6 GWh/d |
| <i>Comment: Construction plan, first step. Unloading capacity at the terminal is 105 GWh/day - one ship, which is unloaded in about 12h...</i> | | | | | |

| Sponsors | | General Information | | Barriers (Count) | |
|----------------|------|-----------------------------|--------------------------------------|------------------|---|
| Balti Gaas LLC | 100% | Promoter | <i>Balti Gaas plc</i> | Regulatory | 2 |
| | | Operator | <i>Balti Gaas plc</i> | Political | 1 |
| | | Host Country | <i>Estonia</i> | Permit Granting | 1 |
| | | Status | <i>Planned</i> | Market | 1 |
| | | Website | <i>Project's URL</i> | Financing | 1 |
| | | Publication Approval Status | <i>Approved</i> | | |

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | |
|-------------------------|---|------------------|------------|----------|------------------------------|---------------------|
| Part of NDP | <i>No (There is no such thing as National Development Plan in Estonia. The project is mentioned in the development plan of transmission grid in Estonia, but only on an informative level.)</i> | Pre-Feasibility | | 11/2008 | Considered TPA Regime | <i>Regulated</i> |
| | | Feasibility | 01/2012 | 01/2016 | Considered Tariff Regime | <i>Regulated</i> |
| | | FEED | 04/2013 | 04/2014 | Applied for Exemption | <i>No</i> |
| | | Market Test | | 10/2013 | Exemption Granted | <i>Not Relevant</i> |
| NDP Number | | Permitting | 01/2008 | 04/2016 | | |
| Currently PCI | <i>Yes (8.1.2.2)</i> | Supply Contracts | | | Exemption in entry direction | <i>0.00%</i> |
| | | FID | | 12/2016 | Exemption in exit direction | <i>0.00%</i> |
| CBCA Decision | <i>No</i> | Construction | 04/2017 | 07/2020 | | |
| Market Survey | <i>Not Relevant (no CBCA decision)</i> | | | | | |

Technical Information (LNG)

| | | |
|-------------------------|------------------------------|--|
| LNG Facility | <i>Paldiski LNG Terminal</i> | |
| Expected Volume (bcm/y) | <i>0</i> | <i>Preliminary estimate only</i> |
| Storage Capacity (m3) | <i>160,000</i> | <i>There is size to increase the terminal to 320 000 m3.</i> |
| Ship Size (m3) | <i>175,000</i> | <i>Dependent on tank size</i> |
| Reloading Ability | <i>Yes</i> | |

PCI Details

| | | |
|--------------------------------------|---|--|
| PCI Benefits | Project aims at fulfilling the infrastructure standard (N-1) rule at regional level in accordance with Article 6(3) of Regulation EU, Project aims at supplying directly or indirectly at least two Member States | |
| General Criteria Fulfilled | Yes | |
| Specific Criteria Fulfilled | Competition, Security of Supply, Sustainability | |
| Specific Criteria Fulfilled Comments | SoS storage possibility for Estonia and Finland if needed. Diversification of sources, routes and counterparties for the whole region. Sustainability is improved by switching from high emissions fuels to NatGas, the adoption of biogas as well as the spot supply necessary for load balancing power plants is facilitated. | |

Time Schedule

| | |
|------------------------|----------------|
| Grant Obtention Date | |
| Delay Since Last TYNDP | <i>2 years</i> |

Delay Explanation

Due to political uncertainties with regard to the existence of competing Regional Baltic LNG terminal projects on the PCI list. There is an MoU between the Estonian and Finnish states as well as Gasum and Alexela (parent group for Balti Gaas) signed on 28th February 2014 and facilitated by the European Commission. The outcome of the process cleared, when the Finngulf project by Gasum was withdrawn from the list of PCIs in October 2015, which meant the regional terminal will be built in Estonia. The project is technically ready for construction, but no FID can be taken before the competing projects issue is solved (two competing projects in Estonia).

Expected Gas Sourcing

LNG (?), Terminal operator is not responsible for LNG sourcing. This is done by terminal clients (TPA). The terminal has LNG quality a

Comments about the Third-Party Access Regime

The regulatory scheme applicable to this project is unclear. Since the project has a PCI label, and thus would have significant cross-border impact, the regulatory scheme must be acceptable to all concerned regulators. Additionally, the regulation for LNG terminals in the project country (Estonia) does not yet exist.

Benefits

| | |
|-------------------------|--|
| Main Driver | Regulation SoS |
| Main Driver Explanation | The region as a whole is an energy island with Russia as the only counterpart and supply source for gas. An LNG import and re-gasification terminal would provide alternative sources as well as storage capability. |
| Benefit Description | Additionally the terminal is capable of servicing the potential Baltic bunkering demand as well as provide alternative fuel to road and rail transport in the affected countries. |

Barriers

| Barrier Type | Description |
|-----------------|---|
| Regulatory | Regulatory framework for LNG facilities in Estonia is insufficient to clarify this point. |
| Permit Granting | Long process |
| Political | The assesment methods of competing PCI projects is not well established. |
| Market | Lack of market maturity |
| Financing | Amortization rates |
| Regulatory | Lack of proper transposition of EU regulation |

Intergovernmental Agreements

| Agreement | Agreement Description | Is Signed | Agreement Signature Date |
|--|--|-----------|--------------------------|
| Agreement between PMs of Estonia and Finland | Agreement in regards to the gas infrastructure in the countries. | Yes | 17/11/2014 |
| Memorandum of Understanding | MoU between Estonia and Finland and LNG project promoters | Yes | 28/02/2014 |

Project GO4LNG LNG terminal Gothenburg

| | | | |
|--|---|---------------------|----------------|
| LNG-N-032 | Project | LNG Terminal | Non-FID |
| Update Date | 04/05/2016 | | Advanced |
| Description | A small-scale LNG terminal, including connection to the transmission grid, placed in the Gothenburg harbour, with flexible send out by rail, truck, bunkering and regasification. | | |
| Regulatory Decisions and similar material conditions | | | |

Capacity Increments Variant For Modelling

| Point | Operator | Year | From Gas System | To Gas System | Capacity |
|----------------|-------------|------|-----------------|---------------|------------|
| Gothenburg LNG | Swedegas AB | 2020 | LNG_Tk_SE | SE | 26.0 GWh/d |

| Sponsors | General Information | | Barriers (Count) | |
|------------------|-----------------------------|-------------------------------|------------------|---|
| Swedegas AB 100% | Promoter | Swedegas AB | Regulatory | 2 |
| | Operator | Swedegas AB | Permit Granting | 1 |
| | Host Country | Sweden | Market | 1 |
| | Status | Planned | | |
| | Website | Project's URL | | |
| | Publication Approval Status | Approved | | |

| NDP and PCI Information | Schedule | Start Date | End Date | Third-Party Access Regime |
|-------------------------|------------------|------------|----------|------------------------------|
| Part of NDP | Pre-Feasibility | | 01/2012 | Considered TPA Regime |
| | Feasibility | 01/2012 | 06/2012 | Considered Tariff Regime |
| NDP Number | FEED | 04/2016 | 10/2016 | Applied for Exemption |
| Currently PCI | Market Test | | 01/2013 | Exemption Granted |
| | Permitting | 10/2013 | 05/2014 | |
| | Supply Contracts | | 12/2016 | Exemption in entry direction |
| CBCA Decision | FID | | 01/2017 | Exemption in exit direction |
| Market Survey | Construction | 01/2017 | 01/2020 | |
| | Commissioning | 2020 | 2020 | |

Technical Information (LNG)

| | | |
|-------------------------|-------------------|---|
| LNG Facility | GO4LNG Gothenburg | |
| Expected Volume (bcm/y) | 1 | |
| Storage Capacity (m3) | 25,000 | 7,500 m3 bullet tanks or 25,000 m3 full containment tank |
| Ship Size (m3) | 75,000 | This size is subject to certain availability at the jetty. If not available, 15600 m3 is the limit. |
| Reloading Ability | Yes | |

PCI Details

| | |
|--------------------------------------|---|
| PCI Benefits | Project aims at fulfilling the infrastructure standard (N-1) rule at regional level in accordance with Article 6(3) of Regulation EU, Project aims at supplying directly or indirectly at least two Member States |
| General Criteria Fulfilled | Yes |
| Specific Criteria Fulfilled | Competition, Market Integration, Security of Supply, Sustainability |
| Specific Criteria Fulfilled Comments | |

Time Schedule

| | |
|------------------------|--|
| Grant Obtention Date | |
| Delay Since Last TYNDP | Delayed |
| Delay Explanation | Slower market development than expected. |

Expected Gas Sourcing

LNG (?)

Benefits

| | |
|-------------------------|---|
| Main Driver | Market Demand |
| Main Driver Explanation | The project is designed to cover several market segments with the main volume driver LNG send out to marine and industrial segments but also for injection to Swedegas' existing transmission grid. |
| Benefit Description | Facilitates supply to non grid customers, such as industry replacing oil and future bunkering of ships to comply with the coming SECA regulation. Connetion to the grid allows an second entry point to the Swedish transmission grid increasing security of supply and competition. Connection also improves functionality such as pressure holding, short term storage etc. |

Barriers

| Barrier Type | Description |
|-----------------|---|
| Regulatory | Small scale LNG is an emerging market with no mature trade patterns which make it difficult to combine capacity holders in a cost-efficient way - given a low rate of return. |
| Permit Granting | Permits obtained |
| Regulatory | Low rate of return |
| Market | Lack of market support |

Tallinn LNG

| LNG-N-962 | Project | LNG Terminal | Non-FID |
|--|---|--------------|--------------|
| Update Date | 10/06/2016 | | Non-Advanced |
| Description | <p>Conventional LNG import terminal (bunkering, break-bulk, on-grid and off-grid land transportation) for improving Baltic as well as Finnish security of supply and serving commercial customers. The project includes 6x800 m3 pressurized bullets, connection to the existing berth (LOA 198 m; depth - 11 m), 2x100m3/h truck loading rack and connection to the low pressure natural gas distribution network located about 1 km from terminal site, covering about 60% of Estonian gas demand. And one to four flat bottom storage tanks with the total LNG storage capacity of 50 000 m3 to 320 000 m3, with second connection to the berth (LOA 365m depth -17m) capable of handling any size LNG carrier on the market, connection to DN711 (MOP 54 bar) national high pressure grid located about 13 km from the terminal site. Rail shunting tracks are 200m. Current scope is envisaged to 160 000 m3 (2x80 000 m3 tanks) with 4 bcma connection to the national high pressure grid. (grid connection on separate CAPEX).</p> | | |
| Regulatory Decisions and similar material conditions | | | |

Capacity Increments Variant For Modelling

| Point | Operator | Year | From Gas System | To Gas System | Capacity |
|-------------|-----------------|------|-----------------|---------------|-------------|
| Tallinn LNG | Vopak / Elering | 2019 | LNG_Tk_EE | EE | 121.0 GWh/d |

| Sponsors | | General Information | | Market | Barriers (Count) | |
|----------------------|-----|-----------------------------|--|--------|------------------|---|
| Vopak / Vopak E.O.S. | 75% | Promoter | Vopak E.O.S. AS / Vopak LNG Holdings B.V/ Port of Tallinn AS | | | 1 |
| Port of Tallinn | 25% | Operator | Vopak / Elering | | | |
| | | Host Country | Estonia | | | |
| | | Status | Planned | | | |
| | | Website | Project's URL | | | |
| | | Publication Approval Status | Approved | | | |

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | |
|-------------------------|--|------------------|------------|----------|------------------------------|------------------|
| Part of NDP | <i>No (Valid energy NDA (ENMAK 2020) foresees the diversification of energy supply via construction of LNG terminals (p.18). The construction of LNG infrastructure is on the list of foremost measures (p.40) and activities (p.41). As this NDA was adopted in 2009 no specific PCI projects could be listed.)</i> | Pre-Feasibility | | 09/2012 | Considered TPA Regime | <i>Regulated</i> |
| | | Feasibility | | | Considered Tariff Regime | <i>Regulated</i> |
| | | FEED | | | Applied for Exemption | <i>No</i> |
| | | Market Test | | | Exemption Granted | <i>Not Yet</i> |
| | | Permitting | | | | |
| | | Supply Contracts | | | Exemption in entry direction | <i>0.00%</i> |
| | | FID | | | Exemption in exit direction | <i>0.00%</i> |
| NDP Number | | Construction | | | | |
| | | Commissioning | 2019 | 2019 | | |
| Currently PCI | Yes (8.1.2.3) | | | | | |
| CBCA Decision | No | | | | | |
| Market Survey | <i>Not Relevant (no CBCA decision)</i> | | | | | |

Technical Information (LNG)

| | |
|-------------------------|--|
| LNG Facility | <i>Tallinn LNG</i> |
| Expected Volume (bcm/y) | <i>4</i> |
| Storage Capacity (m3) | <i>160,000</i> |
| Ship Size (m3) | <i>160,000</i> <i>Terminal berths can receive any size LNG carrier on the market</i> |
| Reloading Ability | <i>No</i> |

PCI Details

| | |
|--------------------------------------|--|
| PCI Benefits | <i>Project aims at fulfilling the infrastructure standard (N-1) rule at regional level in accordance with Article 6(3) of Regulation EU, Project aims at supplying directly or indirectly at least two Member States</i> |
| General Criteria Fulfilled | <i>Yes</i> |
| Specific Criteria Fulfilled | <i>Competition, Market Integration, Security of Supply, Sustainability</i> |
| Specific Criteria Fulfilled Comments | |

Time Schedule

| | |
|------------------------|--|
| Grant Obtention Date | |
| Delay Since Last TYNDP | One to two years |
| Delay Explanation | The project is delayed because of the uncertainty and delay in other PCI projects in the region, as this affects the project scope, feasibility, FEED and FID. |

Expected Gas Sourcing

LNG ()

Benefits

| | |
|-------------------------|--|
| Main Driver | Market Demand |
| Main Driver Explanation | Market integration and diversification, SoS, market development, clean energy. |
| Benefit Description | Reduces isolation and bottlenecks, interoperability, appropriate connections, diversification of sources, diversification of routes, sustainability. |

Barriers

| Barrier Type | Description |
|--------------|-------------------------|
| Market | Lack of market maturity |

Syderiai

| | | | |
|--|--|-------------------------|---------------------|
| UGS-N-034 | Project | Storage Facility | Non-FID |
| Update Date | 22/05/2016 | | Non-Advanced |
| Description | Expected total capacity – 1 bcm, working capacity - 500 mcm. Storage will create conditions for gas reserve storage in Lithuania, increase the security of supply and contribute to the creation of national gas market. | | |
| Regulatory Decisions and similar material conditions | | | |

| Capacity Increments Variant For Modelling | | | | | |
|---|---|------|-----------------|---------------|-------------|
| Point | Operator | Year | From Gas System | To Gas System | Capacity |
| Syderiai | Lietuvos energija AB | 2019 | STcLT | LT | 110.0 GWh/d |
| | <i>Comment: Could be updated in next ENTSOG TYNDP</i> | | | | |
| | Lietuvos energija AB | 2019 | LT | STcLT | 55.0 GWh/d |
| | <i>Comment: Could be updated in next ENTSOG TYNDP</i> | | | | |

| Sponsors | | General Information | | Barriers (Count) | |
|--|------|-----------------------------|-------------------------------|------------------|---|
| Geological investigations | | Promoter | JSC Lietuvos energija AB | Market | 2 |
| Lietuvos energijos gamyba, AB | 100% | Operator | Lietuvos energija AB | Regulatory | 1 |
| Project CBA | | Host Country | Lithuania | Others | 1 |
| Lietuvos energijos gamyba, AB | 100% | Status | Planned | Financing | 1 |
| Reservoir static and dynamic modeling | | Website | Project's URL | | |
| Lietuvos energijos gamyba, AB | 100% | Publication Approval Status | Approved | | |
| Seismic & geological data reinterpretation | | | | | |
| Lietuvos energijos gamyba, AB | 100% | | | | |

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | |
|-------------------------|---|------------------|-------------|-------------|------------------------------|------------------|
| Part of NDP | <i>No (NPD was prepared by public entities, which didnt include projects form third parties. Yet project is included in the National energy independancy strategy.)</i> | Pre-Feasibility | | | Considered TPA Regime | <i>Regulated</i> |
| | | Feasibility | | | Considered Tariff Regime | <i>Regulated</i> |
| | | FEED | | | Applied for Exemption | <i>No</i> |
| NDP Number | | Market Test | | | Exemption Granted | <i>No</i> |
| | | Permitting | | | | |
| Currently PCI | <i>No</i> | Supply Contracts | | | Exemption in entry direction | <i>0.00%</i> |
| | | FID | | | Exemption in exit direction | <i>0.00%</i> |
| CBCA Decision | <i>No</i> | Construction | | | | |
| Market Survey | <i>Not Relevant (no CBCA decision)</i> | Commissioning | <i>2019</i> | <i>2019</i> | | |

Technical Information (UGS)

| | |
|-----------------------|---|
| Storage Facility | <i>Syderiai underground gas storage</i> |
| Storage Facility Type | <i>Aquifer</i> |
| Multiple-Cycle | <i>No</i> |
| Working Volume (mcm) | <i>500.00</i> |

Expected Gas Sourcing

LNG ()

Comments about the Third-Party Access Regime

Issues regarding the TPA regime will be determined at the later stages of the Project implementation

Benefits

| | |
|-------------------------|--|
| Main Driver | <i>Regulation SoS</i> |
| Main Driver Explanation | |
| Benefit Description | <i>The project should create conditions for natural gas reserve storage in Lithuania, increase the security of supply in the region (Latvia and by using Lithuanian-Polish gas internconnection (GIPL))and contribute to the creation of national as well as regional gas market, increase the flexibility of the whole sytem.</i> |

Barriers

| Barrier Type | Description |
|--------------|--|
| Others | High investment costs, unclear payback potential, necessity of implementation of Lithuanian-Polish gas interconnection (GIPL) project. |
| Market | Lack of market support |
| Financing | Availability of funds and associated conditions |
| Regulatory | Low rate of return |
| Market | Lack of market maturity |

Enhancement of Latvia-Lithuania interconnection (Latvian part)

TRA-N-382

Project

Pipeline including CS

Non-FID

Update Date

02/05/2016

Non-Advanced

Description

The project is aimed at the increase of interconnection capacity between Latvia and Lithuania and on Latvian side includes construction of a new pipeline Riga-Iecava and Iecava-Lithuanian border. On Lithuanian side it is planned to increase the capacity of Kiemenai metering station . The project is conditional upon other projects (GIPL) and gas market development in the Baltic countries.

Regulatory Decisions and similar material conditions

Capacity Increments Variant For Modelling

| Point | Operator | Year | From Gas System | To Gas System | Capacity |
|----------|---------------|------|-----------------|---------------|------------|
| | Latvijas Gaze | 2020 | LV | LT | 59.9 GWh/d |
| Kiemenai | Latvijas Gaze | 2020 | LT | LV | 57.4 GWh/d |

Comment: LT→LV 57.41 GWh/d, LT←LV 59.90 GWh/d

Sponsors

General Information

No Barriers Defined

| | |
|-----------------------------|-------------------------------|
| Promoter | JSC "Latvijas Gaze" |
| Operator | Latvijas Gaze |
| Host Country | Latvia |
| Status | Planned |
| Website | Project's URL |
| Publication Approval Status | Approved |

Barriers (Count)

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | |
|-------------------------|---|------------------|-------------|-------------|------------------------------|------------------|
| Part of NDP | <i>No (National Development Plan for 2014-2020 does not specify particular projects. Under activity "Energy efficiency and energy production" title "7.Development of energy infrastructure networks" may include project of enhancement of Latvia-Lithuania interconnection)</i> | Pre-Feasibility | | | Considered TPA Regime | <i>Regulated</i> |
| | | Feasibility | | | Considered Tariff Regime | <i>Regulated</i> |
| | | FEED | | | Applied for Exemption | <i>No</i> |
| | | Market Test | | | Exemption Granted | <i>No</i> |
| | | Permitting | | | | |
| NDP Number | | Supply Contracts | | | Exemption in entry direction | <i>0.00%</i> |
| | | FID | | | Exemption in exit direction | <i>0.00%</i> |
| Currently PCI | | Construction | | | | |
| | | Commissioning | <i>2020</i> | <i>2020</i> | | |
| CBCA Decision | | | | | | <i>No</i> |
| Market Survey | <i>Not Relevant (no CBCA decision)</i> | | | | | |

Pipelines and Compressor Stations

| Pipeline Section | Pipeline Comment | Diameter (mm) | Length (km) | Compressor Power (MW) |
|-------------------------------|---|---------------|-------------|-----------------------|
| Riga-Iecava-Lithuanian border | In case of lower market demand diameter of 500 mm can be used | 700 | 93 | |
| Total | | | 93 | |

PCI Details

| | |
|--------------------------------------|---|
| PCI Benefits | Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity |
| General Criteria Fulfilled | Yes |
| Specific Criteria Fulfilled | Competition, Market Integration, Security of Supply, Sustainability |
| Specific Criteria Fulfilled Comments | |

Expected Gas Sourcing

Russia, LNG ()

Benefits

| | |
|-------------------------|--|
| Main Driver | Market Demand |
| Main Driver Explanation | Main driver of the project will be increased gas flows between Lithuania and Latvia. |
| Benefit Description | The enhancement of bi-directional capacity up to 12 mcm/d between Latvia and Lithuania could increase opportunities for cross-border trade, access to Incukalns UGS for Lithuania and Poland, security of supply, market integration, flexibility of gas transmission systems of Latvia and Lithuania etc. |

Enhancement of Latvia-Lithuania interconnection (Lithuania's part)

| | | | |
|--|---|------------------------------|----------------|
| TRA-N-342 | Project | Pipeline including CS | Non-FID |
| Update Date | 05/05/2016 | | Non-Advanced |
| Description | The project aims at enhancing the capacity of the gas systems interconnection Latvia-Lithuania, ensuring safe and reliable natural gas supply, and achieving a more effective use of the infrastructure and better integration of the gas markets of the Baltic States. It is beneficial and important for the creation of the regional gas market. After the implementation of the project, the bi-directional capacity between Latvia and Lithuania will be increased up to 124.8 GWh (12 MCM) per day. The project is conditional upon other projects diversifying gas flows to be carried out in the Baltic States. | | |
| Regulatory Decisions and similar material conditions | | | |

Capacity Increments Variant For Modelling

| Point | Operator | Year | From Gas System | To Gas System | Capacity |
|---------|---------------|------|-----------------|---------------|------------|
| Kiemeni | AB Amber Grid | 2020 | LV | LT | 60.0 GWh/d |
| | AB Amber Grid | 2020 | LT | LV | 57.4 GWh/d |

| Sponsors | General Information | Barriers (Count) |
|--------------------|---|---------------------|
| AB Amber Grid 100% | Promoter <i>AB Amber Grid</i> Operator <i>AB Amber Grid</i> Host Country <i>Lithuania</i> Status <i>Planned</i> Website <i>Project's URL</i> Publication Approval Status <i>Approved</i> | No Barriers Defined |

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | |
|-------------------------|--|--|----------------|----------------|-----------------------------|------------------------------|
| Part of NDP | <i>Yes (Ten-year Network Development Plan 2014-2023)</i> | Pre-Feasibility | | | Considered TPA Regime | <i>Regulated</i> |
| | | Feasibility | <i>06/2017</i> | <i>12/2017</i> | Considered Tariff Regime | <i>Regulated</i> |
| NDP Number | <i>n/a</i> | FEED | <i>01/2018</i> | <i>12/2018</i> | Applied for Exemption | <i>No</i> |
| | | Market Test | | | <i>06/2017</i> | Exemption Granted |
| Currently PCI | <i>Yes (8.2.1)</i> | Permitting | <i>01/2019</i> | <i>01/2020</i> | | |
| | | Supply Contracts | | | <i>01/2020</i> | Exemption in entry direction |
| CBCA Decision | <i>No</i> | FID | | <i>12/2019</i> | Exemption in exit direction | <i>0.00%</i> |
| Market Survey | | <i>Not Relevant (no CBCA decision)</i> | Construction | <i>01/2020</i> | <i>12/2020</i> | |
| | | | Commissioning | <i>2020</i> | <i>2020</i> | |

PCI Details

| | |
|--------------------------------------|---|
| PCI Benefits | Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity |
| General Criteria Fulfilled | Yes |
| Specific Criteria Fulfilled | Competition, Market Integration, Security of Supply, Sustainability |
| Specific Criteria Fulfilled Comments | |

Benefits

| | |
|-------------------------|---|
| Main Driver | <u>Market Demand</u> |
| Main Driver Explanation | <u>Increased gas flows between Latvia and Lithuania</u> |
| Benefit Description | The enhancement of bi-directional capacity of up to up to 124.8 GWh (12 MCM) per day between Latvia and Lithuania will increase the opportunities for a cross-border trade, higher usage of Latvia's UGS and ensures safe and reliable natural gas supply, flexibility of the transmission systems both in Lithuania and Latvia and better integration of the gas markets of the Baltic States. |

Upgrade of LNG terminal in Świnoujście

| LNG-N-272 | Project | LNG Terminal | Non-FID |
|--|---|--------------|--------------|
| Update Date | 09/05/2016 | | Non-Advanced |
| Description | The main objective of the project is to upgrade the capacity of the LNG terminal in Swinoujście from 5 up to 10 bcm/y. The project will enable to benefit from the economies of scale, as relatively low investment costs (no need to construct the facility from scratch, the majority of costs will be related to the construction of the 3rd storage tank) may bring further benefits to gas consumers in the Baltic Sea area and the CEE region (increase of SoS, competition and liquidity, decrease of gas prices). | | |
| Regulatory Decisions and similar material conditions | | | |

Capacity Increments Variant For Modelling

| Point | Operator | Year | From Gas System | To Gas System | Capacity |
|-------------|------------------|------|-----------------|---------------|-------------|
| Swinoujście | GAZ-SYSTEM S.A. | 2020 | LNG_Tk_PL | PL | 158.0 GWh/d |
| | Polskie LNG S.A. | 2020 | LNG_Tk_PL | PL | 158.0 GWh/d |

| Sponsors | General Information | | | | |
|---|---------------------|-----------------------------|-------------------------------|--|--|
| Gas Transmission Operator GAZ-SYSTEM S.A. | 100% | Promoter | GAZ-SYSTEM S.A. | | |
| | | Operator | Polskie LNG S.A. | | |
| | | Host Country | Poland | | |
| | | Status | Planned | | |
| | | Website | Project's URL | | |
| | | Publication Approval Status | Approved | | |

Permit Granting

Others

Barriers (Count)

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | |
|-------------------------|---|------------------|-------------|----------------|------------------------------|---------------------|
| Part of NDP | <i>Yes (Network Development Plan 2016-2025)</i> | Pre-Feasibility | | <i>11/2015</i> | Considered TPA Regime | <i>Regulated</i> |
| NDP Number | <i>N/A</i> | Feasibility | | | Considered Tariff Regime | <i>Regulated</i> |
| Currently PCI | <i>Yes (8.7)</i> | FEED | | | Applied for Exemption | <i>No</i> |
| CBCA Decision | <i>No</i> | Market Test | | | Exemption Granted | <i>Not Relevant</i> |
| Market Survey | <i>Not Relevant (no CBCA decision)</i> | Permitting | | | Exemption in entry direction | <i>0.00%</i> |
| | | Supply Contracts | | | Exemption in exit direction | <i>0.00%</i> |
| | | FID | | | | |
| | | Construction | | | | |
| | | Commissioning | <i>2020</i> | <i>2020</i> | | |

Technical Information (LNG)

| | |
|-------------------------|------------------------------------|
| LNG Facility | <i>LNG terminal in Świnoujście</i> |
| Expected Volume (bcm/y) | <i>5</i> |
| Storage Capacity (m3) | <i>200,000</i> |
| Ship Size (m3) | <i>216,000</i> |
| Reloading Ability | <i>Yes</i> |

PCI Details

| | |
|--------------------------------------|--|
| PCI Benefits | <i>Project aims at fulfilling the infrastructure standard (N-1) rule at regional level in accordance with Article 6(3) of Regulation EU, Project aims at supplying directly or indirectly at least two Member States</i> |
| General Criteria Fulfilled | <i>Yes</i> |
| Specific Criteria Fulfilled | <i>Competition, Market Integration, Security of Supply, Sustainability</i> |
| Specific Criteria Fulfilled Comments | |

Expected Gas Sourcing

LNG (), LNG exporting countries

Benefits

Main Driver Others

Main Driver Explanation Implementation of the project is driven by SoS and market demand considerations

Benefit Description

The extension of the LNG terminal in Swinoujscie will have an impact on: increasing security of supply in the Baltic Sea and CEE regions by diversifying supply routes, sources (new physical source of supply for both regions) and counterparts (access to global LNG market); enhancing competition on regional markets; promoting natural gas as a reliable, competitive and environmentally-friendly source of energy e.g. in the transport sector (maritime transport); creating a physical hub in Swinoujscie and/or a virtual hub in Poland; establishing adequate technical conditions necessary to cover the forecasted growth of the gas demand in Poland and possible leverage for market coupling potential in the Baltic Sea region and in Central-Eastern Europe. The LNG terminal in Świnoujście contributes to the NSI EAST corridor, as the supplies from Świnoujście may be directed through upgraded transmission system in Poland, PL-CZ PL-SK and PL-UA interconnections towards the CEE region.

Barriers

Barrier Type

Description

Permit Granting

Efficient permitting procedures are necessary for timely implementation of the project.

Others

Possible lack of risk-taking in the private gas sector which would result in insufficient long term commitments to enable the investment decision for the infrastructure operator. It could be mitigated by external subsidies (EU) to cover positive externalities such as SoS, positive environmental impact (reduction of emissions due to fuel change in maritime transport) and supply diversification in the Baltic area and the CEE region (including Ukraine).

Poland - Ukraine Gas interconnection (PL section)

| TRA-N-621 | Project | Pipeline including CS | Non-FID |
|--|---|-----------------------|--------------|
| Update Date | 06/05/2016 | | Non-Advanced |
| Description | <p>The objective of the project is to create a large transportation corridor between Poland and Ukraine. Scope of the Project: 1. Pipeline DN1000 Hermanowice-PL/UA border -1,5 km 2. Metering station in Poland 3. Extension of CS Strachocina Necessary additional transmission system development in Poland 1. Pipeline DN700 Hermanowice-Strachocina, 72 km 2. Pipeline DN1000 Strachocina-Pogórska Wola, 98 km 3. Pipeline DN1000 Pogórska Wola-Tworzeń, 160 km 4. Pipeline DN1000 Tworóg-Tworzeń, 56 km The Project will contribute towards: • establishment of a well-integrated gas market in the region (PL, UA, CZ, SK, HU, RO, MD) • diversification of gas routes and sources for Ukraine • enhancement of security of gas supply for Ukraine • reducing dependency on single gas supplier for Ukraine • strengthening energy solidarity between EU Energy Community and EU contracting countries • access to the gas storages in Ukraine for Poland and EU countries</p> | | |
| Regulatory Decisions and similar material conditions | | | |

| Capacity Increments Variant For Modelling | | | | | |
|---|-----------------|------|------------------------------|---------------|-------------|
| Point | Operator | Year | From Gas System | To Gas System | Capacity |
| PL>UA Interconnector | GAZ-SYSTEM S.A. | 2020 | PL | UAe | 245.0 GWh/d |
| | | | <i>Comment: 245,28 GWh/d</i> | | |
| UA>PL Interconnector | GAZ-SYSTEM S.A. | 2020 | UA | PL | 215.0 GWh/d |
| | | | <i>Comment: 215,04 GWh/d</i> | | |

| Sponsors | | General Information | | No Barriers Defined | Barriers (Count) |
|---------------------------|----------------------|-----------------------------|-----------------|---------------------|------------------|
| PL section | | Promoter | GAZ-SYSTEM S.A. | | |
| Gas Transmission Operator | GAZ-SYSTEM S.A. 100% | Operator | GAZ-SYSTEM S.A. | | |
| UA section | | Host Country | Poland | | |
| Ukrtransgaz | 100% | Status | Planned | | |
| | | Website | | | |
| | | Publication Approval Status | Approved | | |

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | |
|-------------------------|---|--|----------------|----------------|------------------------------|---------------------|
| Part of NDP | <i>Yes (Network Development Plan 2016-2025)</i> | Pre-Feasibility | | | Considered TPA Regime | <i>Regulated</i> |
| | | Feasibility | <i>01/2016</i> | <i>01/2016</i> | Considered Tariff Regime | <i>Regulated</i> |
| NDP Number | <i>N/A</i> | FEED | | | Applied for Exemption | <i>No</i> |
| | | Market Test | | | Exemption Granted | <i>Not Relevant</i> |
| Currently PCI | <i>No</i> | Permitting | | | | |
| | | Supply Contracts | | | Exemption in entry direction | <i>0.00%</i> |
| CBCA Decision | <i>No</i> | FID | | | Exemption in exit direction | <i>0.00%</i> |
| Market Survey | | <i>Not Relevant (no CBCA decision)</i> | Construction | | | |
| | | Commissioning | <i>2020</i> | <i>2020</i> | | |

Pipelines and Compressor Stations

| Pipeline Section | Pipeline Comment | Diameter (mm) | Length (km) | Compressor Power (MW) |
|------------------------------------|--------------------------------------|---------------|-------------|-----------------------|
| Hermanowice-Strachocina | Second DN700 pipeline at this route. | 700 | 72 | |
| Pipeline Hermanowice -PL/UA border | Exact pipeline length is 1.5 km | 1,000 | 2 | |
| Strachocina CS | | | | 30 |
| Total | | | 74 | 30 |

PCI Details

| | |
|--------------------------------------|---|
| PCI Benefits | Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity |
| General Criteria Fulfilled | Yes |
| Specific Criteria Fulfilled | Competition, Market Integration, Security of Supply, Sustainability |
| Specific Criteria Fulfilled Comments | |

Expected Gas Sourcing

Norway, Russia, LNG ()

Benefits

Main Driver Others

| | |
|-------------------------|---|
| Main Driver Explanation | The objective of the project is to create a large transportation corridor between Poland and Ukraine which will contribute towards: • establishment of a well-integrated gas market in the region (PL, UA, CZ, SK, HU, RO, MDA) • diversification of gas routes and sources for Ukraine • enhancement of security of gas supply for Ukraine • reducing dependency on single gas supplier for Ukraine • strengthening energy solidarity between EU Energy Community and EU contracting countries • access to the gas storages in Ukraine for Poland and EU |
| Benefit Description | Establishment of a well-integrated gas market in the region (PL, UA, CZ, SK, HU, RO, MD) |

FSRU Polish Baltic Sea Coast

| | | | |
|--|--|--------------|--------------|
| LNG-N-947 | Project | LNG Terminal | Non-FID |
| Update Date | 07/06/2016 | | Non-Advanced |
| Description | <p>The FSRU Polish Baltic Sea Coast project is planned as the first floating terminal in Poland . It will come on stream in 2020 with annual re-gasification capacity of 4.5-9 bcm/y. The FSRU terminal will consist of one/two storage tank(s) with the capacity of 170 tcm. The project will offer its regasification capacities to gas consumers in Poland and other countries in the Baltic Sea region (supplies to be directed via Gas Interconnection Poland-Lithuania and/or LNG ships) and in Central-Eastern Europe (supplies within the North-South Gas Corridor via PL-CZ, PL-SK and PL-UA interconnections). The scope of the project is currently under assessment.</p> | | |
| Regulatory Decisions and similar material conditions | | | |

Capacity Increments Variant For Modelling

| Point | Operator | Year | From Gas System | To Gas System | Capacity |
|------------------------------|-----------------|------|-----------------|---------------|-------------|
| FSRU Polish Baltic Sea Coast | GAZ-SYSTEM S.A. | 2020 | LNG_Tk_PL | PL | 275.0 GWh/d |

| | | | |
|----------|-----------------------------|---------------------|------------------|
| Sponsors | General Information | No Barriers Defined | Barriers (Count) |
| | Promoter | GAZ-SYSTEM S.A. | |
| | Operator | GAZ-SYSTEM S.A. | |
| | Host Country | Poland | |
| | Status | Planned | |
| | Website | | |
| | Publication Approval Status | Approved | |

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | |
|-------------------------|--|------------------|-------------|-------------|------------------------------|---------------------|
| Part of NDP | <i>No (N/A. This is a new project)</i> | Pre-Feasibility | | | Considered TPA Regime | <i>Regulated</i> |
| NDP Number | | Feasibility | | | Considered Tariff Regime | <i>Regulated</i> |
| | | FEED | | | Applied for Exemption | <i>No</i> |
| Currently PCI | <i>No</i> | Market Test | | | Exemption Granted | <i>Not Relevant</i> |
| | | Permitting | | | | |
| CBCA Decision | <i>No</i> | Supply Contracts | | | Exemption in entry direction | <i>0.00%</i> |
| Market Survey | <i>Not Relevant (no CBCA decision)</i> | FID | | | Exemption in exit direction | <i>0.00%</i> |
| | | Construction | | | | |
| | | Commissioning | <i>2020</i> | <i>2020</i> | | |

Technical Information (LNG)

| | | | | | | |
|-------------------------|-------------------------------------|---|--|--|--|--|
| LNG Facility | <i>FSRU Polish Baltic Sea Coast</i> | | | | | |
| Expected Volume (bcm/y) | <i>9</i> | <i>The project under assessment (considered capacity ranges from 4.5 bcm/y up to 9 bcm/y)</i> | | | | |
| Storage Capacity (m3) | <i>170,000</i> | | | | | |
| Ship Size (m3) | <i>170,000</i> | | | | | |
| Reloading Ability | <i>No</i> | | | | | |

PCI Details

| | | | | | | |
|--------------------------------------|--|--|--|--|--|--|
| PCI Benefits | <i>Project aims at fulfilling the infrastructure standard (N-1) rule at regional level in accordance with Article 6(3) of Regulation EU, Project aims at supplying directly or indirectly at least two Member States</i> | | | | | |
| General Criteria Fulfilled | <i>No</i> | | | | | |
| Specific Criteria Fulfilled | <i>Competition, Security of Supply, Sustainability</i> | | | | | |
| Specific Criteria Fulfilled Comments | | | | | | |

Expected Gas Sourcing

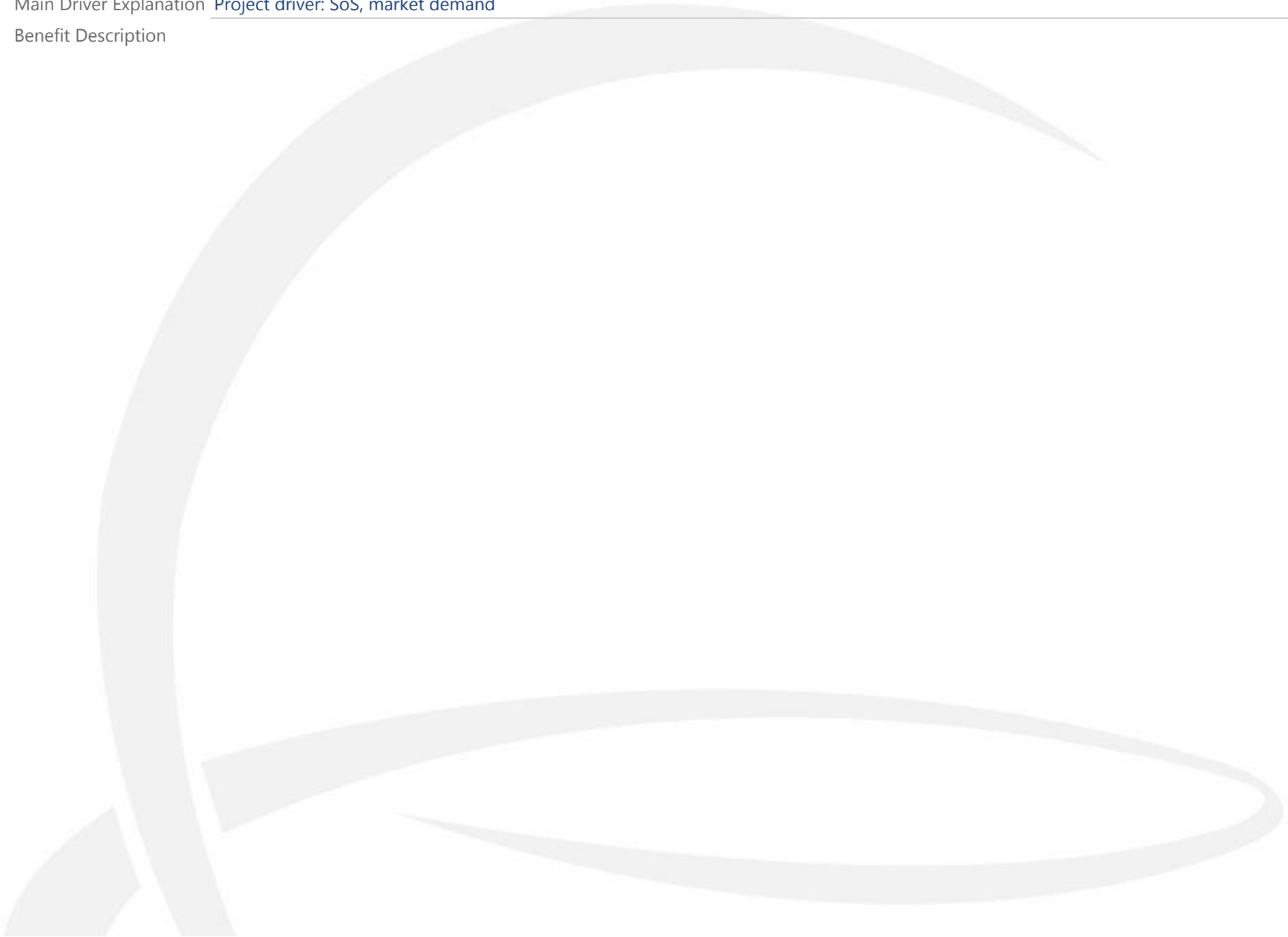
| | |
|--------|--|
| LNG () | |
|--------|--|

Benefits

| | |
|-------------|---------------|
| Main Driver | <i>Others</i> |
|-------------|---------------|

Main Driver Explanation [Project driver: SoS, market demand](#)

Benefit Description



Gassled - Danish upstream system

| | | | |
|--|--|------------------------------|---------------------|
| TRA-N-394 | Project | Pipeline including CS | Non-FID |
| Update Date | 20/05/2016 | | Non-Advanced |
| Description | From Norway to Denmark. Project possible within the next 10 years. The project is not planned, yet. But investigated. It will not be possible to get an exit point from Statoil but the project is vital for the the Baltic pipe project. Capacity: 3-10 bcm/year (one way flow direction from Norway to DK) | | |
| Regulatory Decisions and similar material conditions | | | |

Capacity Increments Variant For Modelling

| Point | Operator | Year | From Gas System | To Gas System | Capacity |
|-------|--------------|------|-----------------|---------------|-------------|
| Nybro | Energinet.dk | 2022 | IB-NPcDKn | DK | 306.8 GWh/d |

| Sponsors | General Information | | Market | Barriers (Count) |
|----------|-----------------------------|--------------|--------|------------------|
| | Promoter | Energinet.dk | | |
| | Operator | Energinet.dk | | |
| | Host Country | Denmark | | |
| | Status | Planned | | |
| | Website | | | |
| | Publication Approval Status | Approved | | 2 |

Enabled Projects

| Project Code | Project Name |
|--------------|--|
| TRA-N-428 | (Mirror) Baltic Pipe |
| TRA-N-780 | Nybro-Interconnector PL-DK - reinforcement |

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | |
|-------------------------|--|------------------|------------|----------|------------------------------|-----------------------|
| Part of NDP | <i>No (This is an upstream project from the Vorth Sea (Norway) to a Danish North Sea Platform. The project is vital for the Baltic-Pipe project (gas pipeline between Denmark and Poland). The project will be included in future national plans in connection when possibly including the Baltic Pipe.)</i> | Pre-Feasibility | | | Considered TPA Regime | <i>Not Applicable</i> |
| | | Feasibility | 09/2015 | 12/2016 | Considered Tariff Regime | <i>Not Applicable</i> |
| | | FEED | | | Applied for Exemption | <i>Not Relevant</i> |
| | | Market Test | | | Exemption Granted | <i>Not Relevant</i> |
| | | Permitting | | | | |
| NDP Number | | Supply Contracts | | | Exemption in entry direction | 0.00% |
| | | FID | | | Exemption in exit direction | 0.00% |
| Currently PCI | No | Commissioning | 2022 | 2022 | | |
| CBCA Decision | No | | | | | |
| Market Survey | <i>Not Relevant (no CBCA decision)</i> | | | | | |

PCI Details

| | |
|--------------------------------------|---|
| PCI Benefits | |
| General Criteria Fulfilled | No |
| Specific Criteria Fulfilled | Competition, Market Integration, Security of Supply, Sustainability |
| Specific Criteria Fulfilled Comments | |

Benefits

| | |
|-------------------------|---------------|
| Main Driver | Market Demand |
| Main Driver Explanation | |
| Benefit Description | |

Barriers

| Barrier Type | Description |
|--------------|--|
| Market | Currently negotiations are ongoing with Norwegian partner. An important issue is the coordination with the Baltic pipe project (connection between DK and PL). |

Market

Lack of market maturity



(Mirror) Baltic Pipe

| TRA-N-428 | Project | Pipeline including CS | Non-FID |
|--|--|-----------------------|--------------|
| Update Date | 20/05/2016 | | Non-Advanced |
| Description | <p>This is a mirror project for the Baltic Pipe promoted by Gaz-System S.A. Entry/Exit is Dragør in Denmark and Niechorze in Poland. The identified, feasible infrastructure solution is a 3-10 bcm/y upstream connection from the Northsea gas-fields to Deanmark with transport through the Danish transmission system to Entry/Exit point of Baltic Pipe and further transport through Baltic Pipe to Niechorze (entry/exit) in Poland. In accordance with the ungoing feasibility study, Energinet.dk's mirror project is: - capacity increment – 306.8 GWh/d (10 bcm/y) from DK=>PL and 91.1 GWh/d (3bcm/y) from PL => DK - year of commissioning – 2022 - FID status – no - PCI status – yes</p> | | |
| Regulatory Decisions and similar material conditions | | | |

| Capacity Increments Variant For Modelling | | | | | |
|---|--------------|------|-----------------|---------------|-------------|
| Point | Operator | Year | From Gas System | To Gas System | Capacity |
| Interconnector PL-DK | Energinet.dk | 2022 | DK | PL | 306.8 GWh/d |
| | Energinet.dk | 2022 | PL | DK | 91.1 GWh/d |

| Sponsors | General Information | | Regulatory | Barriers (Count) | |
|----------|-----------------------------|---------------------|------------|------------------|---|
| | Promoter | <i>Energinet.dk</i> | | | 1 |
| | Operator | <i>Energinet.dk</i> | | | |
| | Host Country | <i>Denmark</i> | | | |
| | Status | <i>Planned</i> | | | |
| | Website | | | | |
| | Publication Approval Status | <i>Approved</i> | | | |

| Enabled Projects | |
|------------------|--|
| Project Code | Project Name |
| TRA-N-394 | Gassled - Danish upstream system |
| TRA-N-780 | Nybro-Interconnector PL-DK - reinforcement |

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | |
|-------------------------|---|------------------|------------|----------|------------------------------|------------------|
| Part of NDP | <i>No (Presently a feasibility study for the Baltic Pipe is carried out in cooperation between Gaz-System (Polish TSO) and Energinet.dk (Danish TSO). This study will be finalized by end of 2016. Depending on the result of the study, the project will be included in the future national development plan.)</i> | Pre-Feasibility | | | Considered TPA Regime | <i>Regulated</i> |
| | | Feasibility | 09/2015 | 12/2016 | Considered Tariff Regime | <i>Regulated</i> |
| | | FEED | | | Applied for Exemption | Yes |
| | | Market Test | | | Exemption Granted | Yes |
| | | Permitting | | | | |
| | | Supply Contracts | | | Exemption in entry direction | 0.00% |
| NDP Number | | FID | | | Exemption in exit direction | 0.00% |
| | | Construction | | | | |
| | | Commissioning | 2022 | 2022 | | |
| Currently PCI | Yes (8.3) | | | | | |
| CBCA Decision | No | | | | | |
| Market Survey | <i>Not Relevant (no CBCA decision)</i> | | | | | |

PCI Details

| | |
|--------------------------------------|---|
| PCI Benefits | Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity |
| General Criteria Fulfilled | Yes |
| Specific Criteria Fulfilled | Competition, Market Integration, Security of Supply, Sustainability |
| Specific Criteria Fulfilled Comments | |

Benefits

| | |
|-------------------------|---------------|
| Main Driver | Market Demand |
| Main Driver Explanation | |
| Benefit Description | |

Barriers

| Barrier Type | Description |
|--------------|--|
| Regulatory | Lack of confidence and risk-taking in the private gas sector as it requires coordinated long-term business cases, fundamental change in current business models/subsidies and involves many parties from three countries. In addition this project must be coordinated with a connection from Norwegian Gassled to Denmark's gas infrastructure. |

Nybro-Interconnector PL-DK - reinforcement

| | | | |
|--|---|------------------------------|---------------------|
| TRA-N-780 | Project | Pipeline including CS | Non-FID |
| Update Date | 20/05/2016 | | Non-Advanced |
| Description | Reinforcement of the Danish Transmission System for transporting 3-10 bcm/year from Gassled-TRA-N-394 (Danish upstream system) entry point in Nybro to Baltic Pipe entry/ exit point in DK. | | |
| Regulatory Decisions and similar material conditions | | | |

Capacity Increments Variant For Modelling

| Point | Operator | Year | From Gas System | To Gas System | Capacity |
|----------------------|---|------|-----------------|---------------|-----------|
| Interconnector PL-DK | Energinet.dk | 2022 | DK | PL | 0.1 GWh/d |
| | <i>Comment: Value of 0.1 to avoid double counting (307 is already provided for interconnector PL-DK (TRA-N-428))</i> | | | | |
| Nybro | Energinet.dk | 2022 | PL | DK | 0.1 GWh/d |
| | <i>Comment: Value of 0.1 to avoid double counting (91.1 is already provided for interconnector PL-DK (TRA-N-428))</i> | | | | |
| | Energinet.dk | 2022 | IB-NPcDKn | DK | 0.1 GWh/d |
| | <i>Comment: Value of 0.1 to avoid double counting (307 is already provided for Gassled (TRA-N-394))</i> | | | | |

| | | | |
|-----------------|-----------------------------|---------------------|-------------------------|
| Sponsors | General Information | No Barriers Defined | Barriers (Count) |
| | Promoter | Energinet.dk | |
| | Operator | Energinet.dk | |
| | Host Country | Denmark | |
| | Status | Planned | |
| | Website | | |
| | Publication Approval Status | Approved | |

Enabled Projects

| Project Code | Project Name |
|--------------|----------------------|
| TRA-N-428 | (Mirror) Baltic Pipe |

TRA-N-394 Gassled - Danish upstream system

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | |
|-------------------------|---|------------------|------------|----------|------------------------------|------------------|
| Part of NDP | <i>No (Presently a feasibility study for the Baltic Pipe is carried out in cooperation between Gaz-System (Polish TSO) and Energinet.dk. The study will be finalized by end of 2016. If the study recommends a capacity of Baltic Pipe well above 3 bcm/y, this reinforcement project will be included in NDP.)</i> | Pre-Feasibility | | | Considered TPA Regime | <i>Regulated</i> |
| | | Feasibility | 09/2015 | 12/2016 | Considered Tariff Regime | <i>Regulated</i> |
| | | FEED | | | Applied for Exemption | Yes |
| | | Market Test | | | Exemption Granted | Yes |
| | | Permitting | | | | |
| | | Supply Contracts | | | Exemption in entry direction | 0.00% |
| NDP Number | | FID | | | Exemption in exit direction | 0.00% |
| Currently PCI | No | Commissioning | 2022 | 2022 | | |
| CBCA Decision | No | | | | | |
| Market Survey | <i>Not Relevant (no CBCA decision)</i> | | | | | |

PCI Details

| | |
|--------------------------------------|---|
| PCI Benefits | Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity |
| General Criteria Fulfilled | Yes |
| Specific Criteria Fulfilled | Competition, Market Integration, Security of Supply, Sustainability |
| Specific Criteria Fulfilled Comments | |

Benefits

| | |
|-------------------------|---------------|
| Main Driver | Market Demand |
| Main Driver Explanation | |
| Benefit Description | |

Poland - Denmark interconnection (Baltic Pipe) - PL section

| | | | |
|--|---|------------------------------|---------------------|
| TRA-N-271 | Project | Pipeline including CS | Non-FID |
| Update Date | 21/06/2016 | | Non-Advanced |
| Description | <p>Baltic Pipe aims to connect the gas transmission systems in Poland and Denmark. The project consists of an offshore pipeline between Poland and Denmark and relevant onshore infrastructure reinforcements in both countries. Baltic Pipe will enable the transmission of Norwegian gas to the CEE region to cover the gas demand in Poland and possible leverage for market coupling potential in the Baltic States and Central-Eastern Europe, including Ukraine. The project may also bring the opportunity for the Danish and Swedish markets to diversify its supply potential in the context of declining production in the Danish part of the North Sea. The Baltic Pipe is intended to contribute to diversification of gas supply and increase competition, integration and security of supply in the CEE region (including Ukraine) and the Baltic States.</p> | | |
| Regulatory Decisions and similar material conditions | | | |

Capacity Increments Variant For Modelling

| Point | Operator | Year | From Gas System | To Gas System | Capacity |
|-----------------------------|-----------------|------|-----------------|---------------|--------------------|
| Interconnector PL-DK | GAZ-SYSTEM S.A. | 2022 | DK | PL | 306.8 GWh/d |
| | GAZ-SYSTEM S.A. | 2022 | PL | DK | 91.1 GWh/d |

| Sponsors | General Information | | | | Barriers (Count) |
|---|-----------------------------|-------------------------------|-----------------|---|------------------|
| Danish section | Promoter | GAZ-SYSTEM S.A. | Permit Granting | 1 | |
| Energinet.dk 100% | Operator | GAZ-SYSTEM S.A. | | | |
| Polish section | Host Country | Poland | Others | 1 | |
| GAZ-SYSTEM S.A. 100% | Status | Planned | | | |
| | Website | Project's URL | | | |
| | Publication Approval Status | Approved | | | |

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | |
|-------------------------|---|------------------|----------------|----------------|------------------------------|-------------------|
| Part of NDP | <i>Yes (Network Development Plan 2016-2025)</i> | Pre-Feasibility | | | Considered TPA Regime | <i>Regulated</i> |
| NDP Number | | Feasibility | <i>03/2016</i> | <i>01/2017</i> | Considered Tariff Regime | <i>Regulated</i> |
| Currently PCI | <i>Yes (8.3)</i> | FEED | | | Applied for Exemption | <i>No</i> |
| CBCA Decision | | <i>No</i> | Market Test | | | Exemption Granted |
| Market Survey | <i>Not Relevant (no CBCA decision)</i> | | Permitting | | | |
| | | Supply Contracts | | | Exemption in entry direction | <i>0.00%</i> |
| | | FID | | | Exemption in exit direction | <i>0.00%</i> |
| | | Construction | | | | |
| | | Commissioning | <i>2022</i> | <i>2022</i> | | |

Pipelines and Compressor Stations

| Pipeline Section | Pipeline Comment | Diameter (mm) | Length (km) | Compressor Power (MW) |
|----------------------------------|---|---------------|-------------|-----------------------|
| Baltic Pipe (offshore section) | Power of the compressor station to be determined at a later stage | 900 | 280 | |
| Goleniow - Lwowek pipeline | | 100 | 188 | |
| Goleniow, Gustorzyn, Odolanow CS | Goleniow CS : 12 MW, Gustorzyn CS : 15 MW, Odolanow CS : 14 MW | | | 41 |
| Niechorze - Ploty pipeline | | 1,000 | 40 | |
| Onshore terminal - Niechorze | | | | |
| Total | | | 508 | 41 |

PCI Details

| | |
|--------------------------------------|---|
| PCI Benefits | Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity |
| General Criteria Fulfilled | Yes |
| Specific Criteria Fulfilled | Competition, Market Integration, Security of Supply, Sustainability |
| Specific Criteria Fulfilled Comments | |

Expected Gas Sourcing

Norway, LNG ()

Benefits

| | |
|-------------------------|--|
| Main Driver | Others |
| Main Driver Explanation | Regulation SoS and market integration |
| Benefit Description | <p>Baltic Pipe will have a significant impact on: increasing security of supply in the CEE and Baltic Sea region by diversifying supply routes, sources and counterparts; creating well-interconnected gas infrastructure in the Baltic Sea region; enhancing competition on the regional markets (CEE and the Baltic region); promoting natural gas as a reliable, competitive and environmentally-friendly source of energy e.g. in the power generation and transport sectors.</p> <p>The Baltic Pipe project also contributes to the NSI EAST and BEMIP priority corridors, as the project will allow to transport gas from North Sea deposits to the CEE countries, namely to the CZ, SK and UA (via the North-South corridor in Poland, PL-CZ, PL-SK and PL-UA interconnections) and to the Baltic region (via GIPL to the Baltic States, and further to FI via Baltconnector). Since the project is bidirectional it will also provide the security of supply benefits for DK and SE (access to LNG).</p> |

Barriers

| Barrier Type | Description |
|-----------------|--|
| Permit Granting | Efficient permitting procedures are necessary for timely implementation of the project. |
| Others | There is a lack of confidence and risk-taking in the private gas sector to the Baltic Pipe project, as it requires coordinated long term business cases, fundamental change in current business models/subsidies and involves many parties from at least three countries (PL, DK, NO). Granting the EU priority for the project and a grant to the Polish and Danish TSOs may well accelerate the implementation of the project. |

North - South Gas Corridor in Eastern Poland

| | | | |
|--|---|------------------------------|---------------------|
| TRA-N-245 | Project | Pipeline including CS | Non-FID |
| Update Date | 21/06/2016 | | Non-Advanced |
| Description | <p>The investment tasks within the project constitute essential elements of the planned North-South gas interconnections in Central Eastern and South Eastern Europe. The corridor covers Eastern Poland and is planned to be connected to two interconnectors, i.e. Poland – Lithuania (GIPL) and Poland – Slovakia interconnections. Implementation of the project will allow for significant volumes of gas to be transported via the corridor in Eastern Poland towards PL-SK interconnection and the GIPL project. This investment plays a key role in the integration of Baltic States (via GIPL) with the CEE region along the North-South axis. It will also enhance the access to the USG Strachocina that have large expansion potential and may serve as essential security of supply infrastructure in the CEE region. The investment tasks are planned to be commissioned in 2023.</p> | | |
| Regulatory Decisions and similar material conditions | | | |

Capacity Increments Variant For Modelling

| Point | Operator | Year | From Gas System | To Gas System | Capacity |
|-------------------------------------|---|------|-----------------|---------------|-----------|
| | GAZ-SYSTEM S.A. | 2023 | DScPL | PL | 0.0 GWh/d |
| Aggregated Distribution (PL) | <i>Comment: Increment not assessed by ENTSOG: Distribution points are not in the scope of the TYNDP</i> | | | | |

| Sponsors | | General Information | | Barriers (Count) | |
|---------------------------|----------------------|-----------------------------|-------------------------------|------------------|---|
| Gas Transmission Operator | GAZ-SYSTEM S.A. 100% | Promoter | GAZ-SYSTEM S.A. | Permit Granting | 1 |
| | | Operator | GAZ-SYSTEM S.A. | Others | 1 |
| | | Host Country | Poland | Financing | 1 |
| | | Status | Planned | | |
| | | Website | Project's URL | | |
| | | Publication Approval Status | Approved | | |

Enabled Projects

| Project Code | Project Name |
|--------------|--|
| TRA-N-212 | Gas Interconnection Poland-Lithuania (GIPL) - PL section |
| TRA-N-275 | Poland - Slovakia interconnection (PL section) |
| TRA-N-621 | Poland - Ukraine Gas interconnection (PL section) |

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | |
|-------------------------|--|---------------------------------|--------------|----------|------------------------------|--------------|
| Part of NDP | Yes (Network Development Plan 2016-2025) | Pre-Feasibility | | | Considered TPA Regime | Regulated |
| | | Feasibility | | | Considered Tariff Regime | Regulated |
| NDP Number | N/A | FEED | | | Applied for Exemption | No |
| | | Market Test | | | Exemption Granted | Not Relevant |
| Currently PCI | Yes (6.2.2) | Permitting | | | | |
| | | Supply Contracts | | | Exemption in entry direction | 0.00% |
| CBCA Decision | No | FID | | | Exemption in exit direction | 0.00% |
| Market Survey | | Not Relevant (no CBCA decision) | Construction | | | |
| | | Commissioning | 2023 | 2023 | | |

Pipelines and Compressor Stations

| Pipeline Section | Pipeline Comment | Diameter (mm) | Length (km) | Compressor Power (MW) |
|-------------------------------------|------------------|---------------|--------------|-----------------------|
| CS Pomorze | | | | 35 |
| Gustorzyn-Wronow pipeline | | 1,200 | 410 | |
| Hermanowice-Jaroslaw pipeline | | 700 | 39 | |
| Hermanowice-Strachocina pipeline | | 700 | 72 | |
| Jaroslaw-Rozwadow pipeline | | 700 | 60 | |
| Kolnik-Gustorzyn pipeline | | 1,200 | 230 | |
| Pierscien Trojmiejski | | 1,000 | 100 | |
| Rembelszczyzna compressor station | | | | 23 |
| Rembelszczyzna-Wronow pipeline | | 1,000 | 135 | |
| Rozwadow-Konskowola-Wronow pipeline | | 700 | 103 | |
| Total | | | 1,149 | 58 |

PCI Details

| | |
|-----------------------------|---|
| PCI Benefits | Project changes the capability to transmit gas across the borders of the member states concerned by at least 10%, compared to the situation prior to the commissioning of the project, Project concerns investment in reverse flow capacity |
| General Criteria Fulfilled | Yes |
| Specific Criteria Fulfilled | Competition, Market Integration, Security of Supply, Sustainability |

Specific Criteria Fulfilled Comments

Expected Gas Sourcing

Caspian Region, Norway, Russia, LNG ()

Benefits

| Main Driver | Others |
|-------------------------|--|
| Main Driver Explanation | Regulation SoS, market demand |
| Benefit Description | The project will allow to transport significant volumes of gas via PL-SK and PL-UA interconnections. It will also enhance the access to the USG Strachocina that have large expansion potential and may serve as essential security of supply infrastructure in the CEE region. Construction of the pipelines within this project, together with completion of the PL-SK interconnection and GIPL, will have a positive impact on the competition in the CEE and Baltic regions, as the project will provide a possibility to open the market for more gas suppliers. This would in turn mean ending the state of major dependency on one single gas supplier for the countries in the respective regions thanks to the potential access to gas deliveries from new sources. The projects in Eastern Poland are located in the area which offers the possibility to extract unconventional gas. If reserves are confirmed, the transmission infrastructure in Eastern Poland might be used to transport gas to adjacent systems. |

Barriers

| Barrier Type | Description |
|-----------------|--|
| Permit Granting | Efficient permitting procedures are necessary for timely implementation of the project. |
| Others | Due to the project drivers which are mainly related to SoS in Central-Eastern Europe, the project does not meet the criterion of economic viability, so the external co-financing is indispensable. Lack of external financial support may be a serious barrier in implementation. |
| Financing | Due to the project drivers which are mainly related to SoS in Central-Eastern Europe, the project does not meet the criterion of economic viability, so the external co-financing is indispensable. Lack of external financial support may be a serious barrier in implementation. |

LNG Terminal in Klaipeda

| | | | |
|--|---|--------------|--------------|
| LNG-N-824 | Project | LNG Terminal | Non-FID |
| Update Date | 23/05/2016 | | Non-Advanced |
| Description | <p>As this pilot action turned to be a success story, Klaipedos nafta decided to develop a project centred on the purchase of the FSRU Terminal, i.e. exercise the purchase option available within the pilot action's existing TCP contract. The long-term solution and the project need is an assurance of the already achieved substantial regional benefits of Klaipeda LNG terminal to be utilised to the full extent in the future. The benefits include security of supply, availability of alternative natural gas supplies, LNG break bulk infrastructure and effective natural gas price cap. Purchase of the FSRU would also facilitate substantially lower regasification and reload tariffs and consequentially lower the effective natural gas price cap for all consumers in the region, as well as facilitate faster development of small and mid-scale LNG infrastructure and faster switch-over to LNG from more polluting fuels.</p> | | |
| Regulatory Decisions and similar material conditions | | | |

Capacity Increments Variant For Modelling

| Point | Operator | Year | From Gas System | To Gas System | Capacity |
|----------------|--------------------|------|-----------------|---------------|-------------|
| Klaipeda (LNG) | AB Klaipėdos Nafta | 2024 | LNG_Tk_LT | LT | 122.4 GWh/d |

| Sponsors | | General Information | | Barriers (Count) | |
|--------------------|------|-----------------------------|-------------------------------|------------------|---|
| AB Klaipėdos Nafta | 100% | Promoter | AB Klaipėdos Nafta | Regulatory | 2 |
| | | Operator | AB Klaipėdos Nafta | Market | 2 |
| | | Host Country | Lithuania | Financing | 2 |
| | | Status | Planned | Political | 1 |
| | | Website | Project's URL | | |
| | | Publication Approval Status | Approved | | |

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | |
|-------------------------|---|------------------|-------------|----------------|------------------------------|---------------------|
| Part of NDP | <i>No (NDP covers only TSO investments. LNG terminal is not a part of TSO network, therefore NDP does not include LNG terminal projects. LNG projects are covered by TYNDP at EU level, not at the national level.)</i> | Pre-Feasibility | | | Considered TPA Regime | <i>Regulated</i> |
| | | Feasibility | | | Considered Tariff Regime | <i>Regulated</i> |
| | | FEED | | | Applied for Exemption | <i>No</i> |
| | | Market Test | | | Exemption Granted | <i>Not Relevant</i> |
| | | Permitting | | | | |
| NDP Number | | Supply Contracts | | | Exemption in entry direction | <i>0.00%</i> |
| Currently PCI | <i>No</i> | FID | | <i>12/2018</i> | Exemption in exit direction | <i>0.00%</i> |
| | | Construction | | | | |
| CBCA Decision | <i>No</i> | Commissioning | <i>2024</i> | <i>2024</i> | | |
| Market Survey | <i>Not Relevant (no CBCA decision)</i> | | | | | |

Technical Information (LNG)

| | | | | | | |
|-------------------------|--------------------------|---|--|--|--|--|
| LNG Facility | <i>FSRU Independence</i> | | | | | |
| Expected Volume (bcm/y) | <i>4</i> | | | | | |
| Storage Capacity (m3) | <i>170,000</i> | <i>170.000 m3 of LNG capacity for short period of time due to LNG aging</i> | | | | |
| Ship Size (m3) | <i>170,000</i> | | | | | |
| Reloading Ability | <i>Yes</i> | | | | | |

PCI Details

| | | | | | | |
|--------------------------------------|--|--|--|--|--|--|
| PCI Benefits | Project aims at fulfilling the infrastructure standard (N-1) rule at regional level in accordance with Article 6(3) of Regulation EU, Project aims at supplying directly or indirectly at least two Member States | | | | | |
| General Criteria Fulfilled | Yes | | | | | |
| Specific Criteria Fulfilled | Competition, Market Integration, Security of Supply, Sustainability | | | | | |
| Specific Criteria Fulfilled Comments | Enhanced security of natural gas supply Diversification of natural gas supply sources Full Third Party access Baltic States connection to the global gas markets Natural gas prices cap in the region LNG break bulk facility for the Baltic Sea Region Significant economic benefits created for the region | | | | | |

Expected Gas Sourcing

| | | | | | | |
|--------|--|--|--|--|--|--|
| LNG () | | | | | | |
|--------|--|--|--|--|--|--|

Comments about the Third-Party Access Regime

Tariff regulation created by Lithuania NRA and Parliament, which was also approved by EC -State aid SA.36740 (2013/NN) – Lithuania. All services of Klaipeda LNG terminal is regulated.

Benefits

| | |
|-------------------------|--|
| Main Driver | Regulation SoS |
| Main Driver Explanation | Ensure certainty on the SoS in the region Without a project there is uncertainty on: - compliance with N-1 standard - competition of gas supply in the market - regional gas market |
| Benefit Description | Ensure certainty on independence on the single external natural gas supplier Ensure certainty on diversification of natural gas supply sources Ensure certainty to the regional gas market players and create real gas market ensuring natural gas supply in the Baltics The project is also driven by a market demand to have flexibility in choosing different sources of supply, to be connected with global market |

Barriers

| Barrier Type | Description |
|--------------|--|
| Regulatory | According to LNG terminal Law, all fixed LNG terminal expenses are covered via gas transmission tariff, while variable costs are included in regasification tariff. Due to low or none variable costs, capacity reservation is free of charge. Additional income from other regulated LNG terminal activities shall cover fixed terminal expenses and no additional profit shall be experienced. |
| Political | Klaipeda LNG terminal project is supported by all political institutions in Lithuania (i.e. President office, the Government, Ministries, Parliament, other). Project is supported by COM and pilot action is regarded as a success story: https://ec.europa.eu/energy/sites/ener/files/documents/1_EN_ACT_part1_v10-1.pdf |
| Financing | Amortization rates |
| Financing | Availability of funds and associated conditions |
| Market | Lack of market maturity |
| Market | Lack of market support |
| Regulatory | Low or zero-priced short-term capacity |

UGS Damasławek

| UGS-N-914 | Project | Storage Facility | Non-FID |
|--|--|------------------|--------------|
| Update Date | 28/06/2016 | | Non-Advanced |
| Description | The purpose of the project is to construct a UGS facility in salt caverns in Damasławek in central Poland. The initial working gas volume will amount for 450 mcm. UGS Damasławek will play an important role from SoS and competition perspective. It will also be instrumental in terms of ensuring proper functioning of the transmission system in Poland. | | |
| Regulatory Decisions and similar material conditions | | | |

Capacity Increments Variant For Modelling

| Point | Operator | Year | From Gas System | To Gas System | Capacity |
|-----------------|-----------------|------|-----------------|---------------|-------------|
| Damasławek (PL) | GAZ-SYSTEM S.A. | 2026 | STcPL | PL | 200.0 GWh/d |
| | GAZ-SYSTEM S.A. | 2026 | PL | STcPL | 100.0 GWh/d |

| Sponsors | General Information | Barriers (Count) |
|----------------------|---|---------------------|
| GAZ-SYSTEM S.A. 100% | Promoter: <i>GAZ-SYSTEM S.A.</i> Operator: <i>GAZ-SYSTEM S.A.</i> Host Country: <i>Poland</i> Status: <i>Planned</i> Website: Publication Approval Status: <i>Approved</i> | No Barriers Defined |

| NDP and PCI Information | | Schedule | Start Date | End Date | Third-Party Access Regime | |
|-------------------------|---|--|--------------|-------------|------------------------------|---------------------|
| Part of NDP | <i>Yes (Network Development Plan 2016-2025)</i> | Pre-Feasibility | | | Considered TPA Regime | <i>Regulated</i> |
| | | Feasibility | | | Considered Tariff Regime | <i>Regulated</i> |
| NDP Number | <i>N/A</i> | FEED | | | Applied for Exemption | <i>No</i> |
| | | Market Test | | | Exemption Granted | <i>Not Relevant</i> |
| Currently PCI | <i>No</i> | Permitting | | | | |
| | | Supply Contracts | | | Exemption in entry direction | <i>0.00%</i> |
| CBCA Decision | <i>No</i> | FID | | | Exemption in exit direction | <i>0.00%</i> |
| Market Survey | | <i>Not Relevant (no CBCA decision)</i> | Construction | | | |
| | Commissioning | | <i>2026</i> | <i>2026</i> | | |

Technical Information (UGS)

| | |
|-----------------------|-----------------------|
| Storage Facility | <i>UGS Damastawek</i> |
| Storage Facility Type | <i>Salt Cavern</i> |
| Multiple-Cycle | <i>Yes</i> |
| Working Volume (mcm) | <i>450.00</i> |

PCI Details

| | |
|--------------------------------------|---|
| PCI Benefits | Project aims at fulfilling the infrastructure standard (N-1) rule at regional level in accordance with Article 6(3) of Regulation EU, Project aims at supplying directly or indirectly at least two Member States |
| General Criteria Fulfilled | <i>No</i> |
| Specific Criteria Fulfilled | Competition, Market Integration, Security of Supply, Sustainability |
| Specific Criteria Fulfilled Comments | |

Benefits

| | |
|-------------------------|--|
| Main Driver | <i>Others</i> |
| Main Driver Explanation | <i>Project drivers: SoS, market demand</i> |
| Benefit Description | |