LNG Terminal Krk in Croatia

LNG Croatia LLC
LNG Croatia LLC is the company responsible for the development of LNG import terminal Project on the Island of Krk.

The proposed Project will include the design, building and operating of the infrastructure necessary for receiving, storing and regasification of liquefied natural gas and it will be implemented as a floating LNG terminal, i.e. Floating Storage Regasification Unit (FSRU) in the first stage of the project.

The Project will have a number of benefits including:

- diversification of the natural gas supply for CE&SE;
- increase of security of gas supply;
- more effective integration of key infrastructure projects like North-South Gas Interconnections in CE&SEE (“NSI East Gas”) into the regional gas market;
- increase of market opportunities for market players in CE&SEE and of their competitiveness in the region; etc.
Key infrastructure gas projects in the Baltic-Adriatic corridor

Priority gas infrastructure projects CESEC

Project is included on a number of lists of strategic importance for both Croatia and the EU:

- Included in the EU list of Projects of Common Interest - PCI list
- Declared a project of strategic importance for the Republic of Croatia
- Key infrastructure gas project in the Baltic-Adriatic corridor
- Included in CESEC action plan
- Included in European Energy Security Strategy
The target markets for LNG Croatia have been identified in 8 countries for a total demand of 37 bcm.

- The primary markets are considered in Croatia and Hungary for a total demand of 12 bcm.
- Other potential markets account for a total demand of 25 bcm.

**South East Europe LNG Croatia reference market** (Eurogas, 2016E)

<table>
<thead>
<tr>
<th>Country</th>
<th>Gas demand, bcm/year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary markets</strong></td>
<td></td>
</tr>
<tr>
<td>Croatia</td>
<td>2.7</td>
</tr>
<tr>
<td>Hungary</td>
<td>9.5</td>
</tr>
<tr>
<td><strong>Other potential markets</strong></td>
<td></td>
</tr>
<tr>
<td>Austria</td>
<td>8.6</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>8.2</td>
</tr>
<tr>
<td>Slovakia</td>
<td>4.7</td>
</tr>
<tr>
<td>Serbia</td>
<td>2.0</td>
</tr>
<tr>
<td>Slovenia</td>
<td>0.7</td>
</tr>
<tr>
<td>Bosnia &amp; Herzegovina</td>
<td>0.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>36.7</strong></td>
</tr>
</tbody>
</table>
Gas evacuation routes for LNG Terminal Krk – 6 bcm Hungary, 4.5 bcm Slovenia

- At the beginning of LNG terminal Krk operations the Terminal’s capacity will be limited by the capacity of the Transmission System which should amount to 300,000 Nm³/hour or 2.6 bcm of natural gas per annum.

- Hence, Terminal Capacities offered to market participants in Binding Open Season with TUA signing as the final step, at Q1/2018, shall not exceed the maximum capacity of the Transmission System of 2.6 bcm/y.

- Croatian Transmission System Operator Plinacro is planning additional pipeline and compressor investments which would increase the maximum capacity of the Transmission System to 800,000 Nm³/hour after 2020.

- Once the capacity of the Transmission System are increased, LNG Croatia is going to conduct additional Open Season for allocation of new unused capacities.
LNG Terminal Krk will be developed by LNG Croatia on a Project finance basis and will be supported by potential international investors.
SERVICES OFFERED

1. **Primary service – LNG regasification – a bundled service consisting of:**
   - Berthing of LNG carrier and loading LNG to the FSRU;
   - Temporary storage;
   - Natural gas send out.

2. **Secondary service – LNG reloading – a bundled service consisting of:**
   - Berthing of LNG carrier and loading LNG to the FSRU;
   - Temporary storage;
   - Berthing of LNG carrier and reloading LNG from the FSRU.

3. **Other Secondary services, such as:**
   - Gassing up of LNG carriers;
   - Cooling down of LNG carriers;
   - Compatibility check of LNG carriers;
   - And other...
Project is developed as an On-shore LNG terminal solution. A number of project documentation was made during that period, which was mostly co-financed by EU, with several permits obtained including:
1. EIA;
2. Location permit.

2. The Government of Republic of Croatia has, at its 27th session on 8th of June 2016, adopted the conclusion on speeding-up of activities on realization of construction of LNG terminal on the Island of Krk as an important factor in the diversification of natural gas supply as well as enhancement of security of natural gas supply for the countries of Southeast Europe. Based on the conclusion and in compliance with the project development that envisages phase construction of the terminal, phase of the project which includes construction of the floating terminal for storing and regasification of natural liquefied gas was to be implemented in the first stage while the on-shore solution remains a possibility if proven to be economically viable.

3. LNG Croatia LLC has applied, on 8th of November 2016, on CEF-Energy-2016-2 programme through which co-financing for studies and works for implementation of a floating LNG terminal solution has been requested. The CEF Coordination Committee gave, on 17th of February 2017, a positive opinion and a decision on future co-financing of the project has been reached. € 747,000,00 has been approved for co-financing of studies (50% of total cost), and € 101,400,000,00 (27.92% of total cost) for works, which amounts to a total of € 102,147,000,00.

4. LNG Croatia has signed a contract with the selected contractor that will make studies for implementation of the FSRU solution. New EIA, Conceptual Design, Main Design and other documentation will be made.
After receiving offers in the Open Season procedure LNG Croatia has confirmed the strong interest in the project and expects to sign Terminal User Agreements (TUA) at Q1/2018;

Final results of OS procedure will have significant impact on FID;

Due to the change in the concept documentation needs to be changed/modified. LNG Croatia has started to align and intensively work with the National Gas Transmission System Operator (Plinacro Ltd.) and National Regulatory Agency (HERA) on the Open Season procedure i.e. booking the capacity of the terminal, which is expected to reach its binding phase, with signing of Terminal User Agreements between LNG Croatia and interested terminal users as the final step, at Q1/2018.

Further information on Open Season will be provided in the Binding Open Season Update Process Paper which will be available for eligible participants by 23 June, 2017.

Open Season procedure timeline

- **January 2015**: Start of Open Season (OS) Procedure
- **May 2015**: Offers Submission Deadline
- **October 2015**: Memorandum of Understanding (MoU) signed
- **H2/2017**: Start of Binding OS in coordination with Plinacro
- **June, July 2017**: Market Consultation
- **H4/2017**: Preliminary Open Season
- **Q1/2018**: TUA signing

Activities of Binding Open Season in 2017
Project development schedule

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Local infrastructure construction</td>
<td>FEED</td>
<td>Procurement</td>
<td>EPC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FSRU delivery</td>
<td></td>
<td></td>
<td>Procurement</td>
<td>FSRU delivery</td>
<td></td>
</tr>
<tr>
<td>Open Season procedure</td>
<td>Market consultation, Preliminary Open Season, Binding Open Season</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EIA and permits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Setting up the regulation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEF subsidy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project financing</td>
<td>Gas Act, Tariff methodology</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Start-up and operations</td>
<td>Application coordination, Grant Agreement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Negotiations with lenders</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Final Investment Decision</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Commercial operations date</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Thank you for your attention

Contact
Goran Frančić,
Managing Director

Address: Radnička cesta 80 - 10 000 Zagreb,
Croatia
E-mail: info@lng.hr