

Refining at NIS, Bottom of the Barrel Project

Construction of a delayed coking unit at the Pančevo Refinery

November 6th, 2017
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The purpose of the project is to expand the product line and the production of the petroleum products that generate the biggest revenues. The project is aimed at helping NIS to achieve the targets of the Refining Block and NIS overall.

Finding ways to sell high-sulphur fuel oil given the low price on the market, and the expected legal limitations on the production and sale of this type of fuel oil starting 2018.

Fuel oil will partially be replaced with coke. Coke is in demand on the local market, while now 100% of domestic coke demand is met through import. It will help increase the production of light petroleum products, including diesel (a 30% rise) without the need to buy additional feedstock, which, in turn, will make the NIS's refining business more efficient.

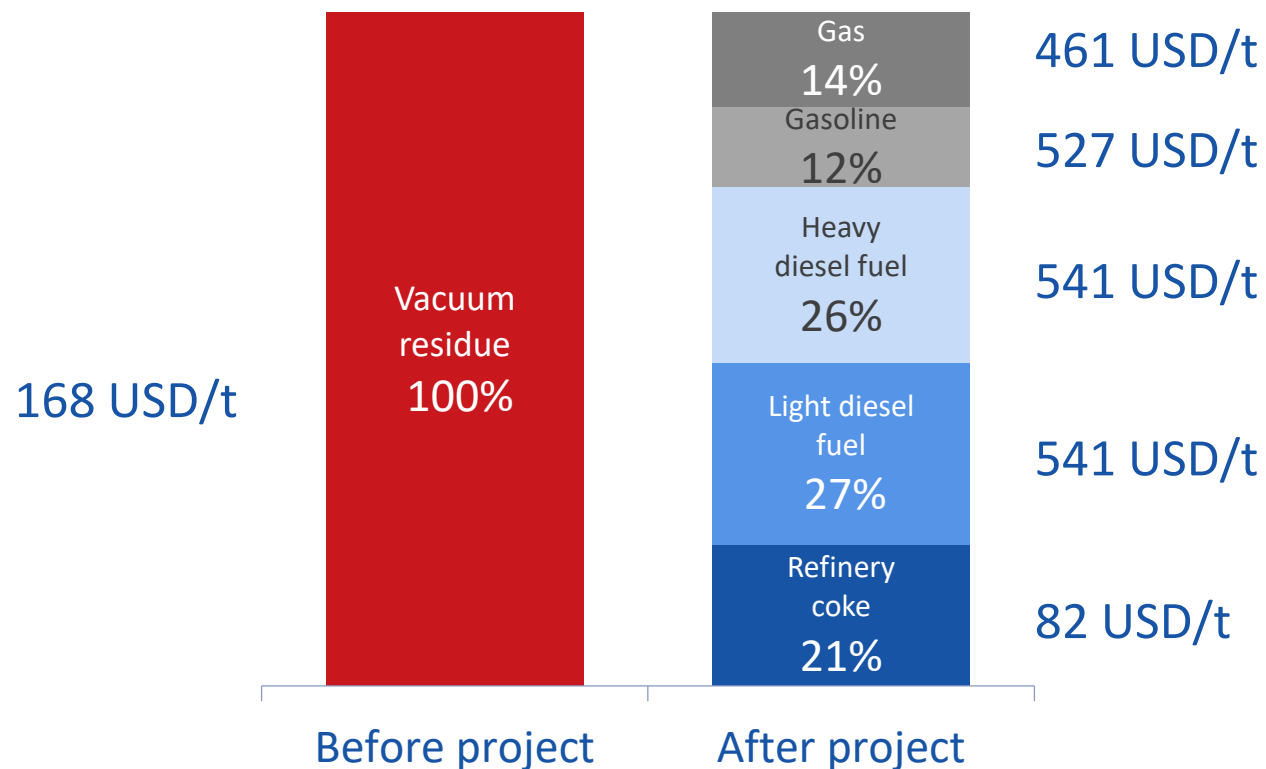
Increasing the refining depth to 99.2%, with a maximum utilization of the existing refining capacities and infrastructure.

Continuing the refurbishment of NIS refining capacities with the aim of maximizing the NIS' EBITDA, taking into consideration market demand and constraints.

Consolidating NIS positions in the refining business across the Balkan region.

Key petroleum product production figures

New unit product breakdown



Average price:

168 USD/t



432 USD/t

Project benefits:

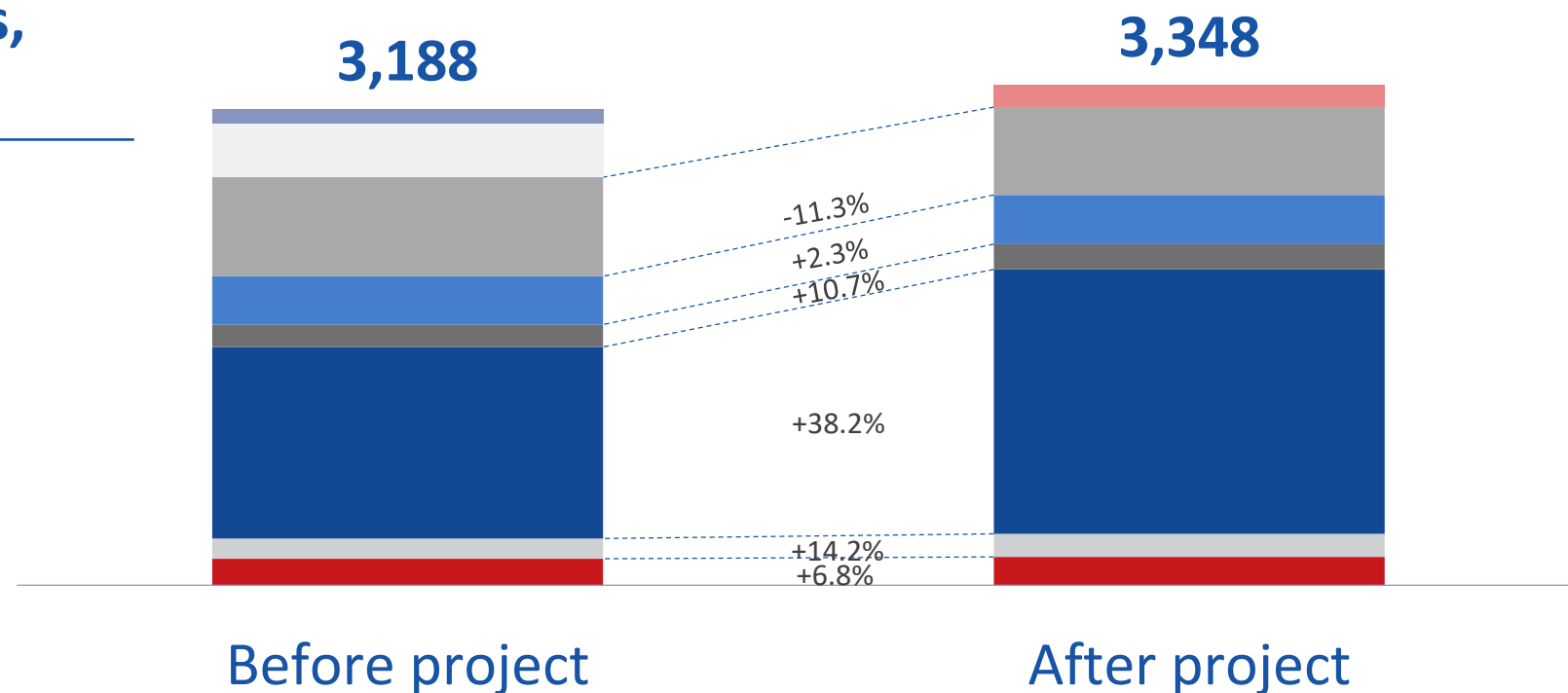
- Increased production of Euro diesel, autogas and jet fuel
- Maximum reduction in or discontinuation of fuel oil production; increased refining depth at Pančevo Refinery from 85.5% to 99.2 % following the startup of the DCU.
- Qualitative improvement of EBITDA.

DCU project will help increase light product yield (~ 85 %), including that of diesel fuel (~ 50%) to the demand level of the NIS' sales division

UPGRADE OF PANČEVO REFINERY – IMPROVED EFFICIENCY AND INCREASED REFINING DEPTH

Output of petroleum products, [kt]

- Fuel oil
- Bitumen and polymer bitumen
- Coke
- Straight-run gasoline
- Automobile gasoline*
- Jet fuel
- Euro diesel
- Other**
- LPG+Propylene



Light product share

74.1%

84.6%

Refining depth***

85.5%

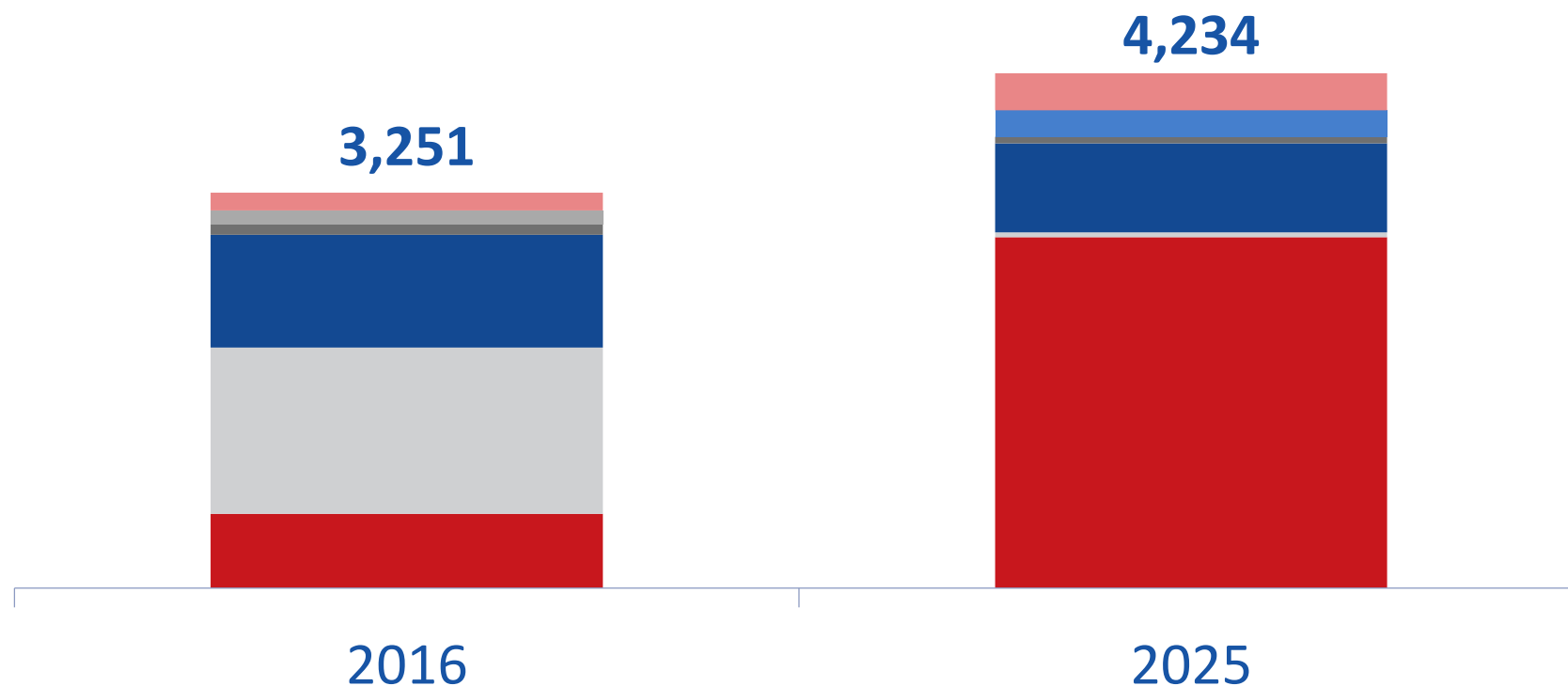
99.2%

* Euro BMB 95,98, 100 ** Aromatics, Euro EL (low sulphur heating oil), sulphur *** According to methodology applied in Russian Federation

Pančevo Refinery upgrade opens more opportunities for optimizing the crude basket

Feedstock,
[kt]

- Other feedstock*
- CPC
- New Port
- Other crudes
- Domestic crudes
- REB
- Kirkuk

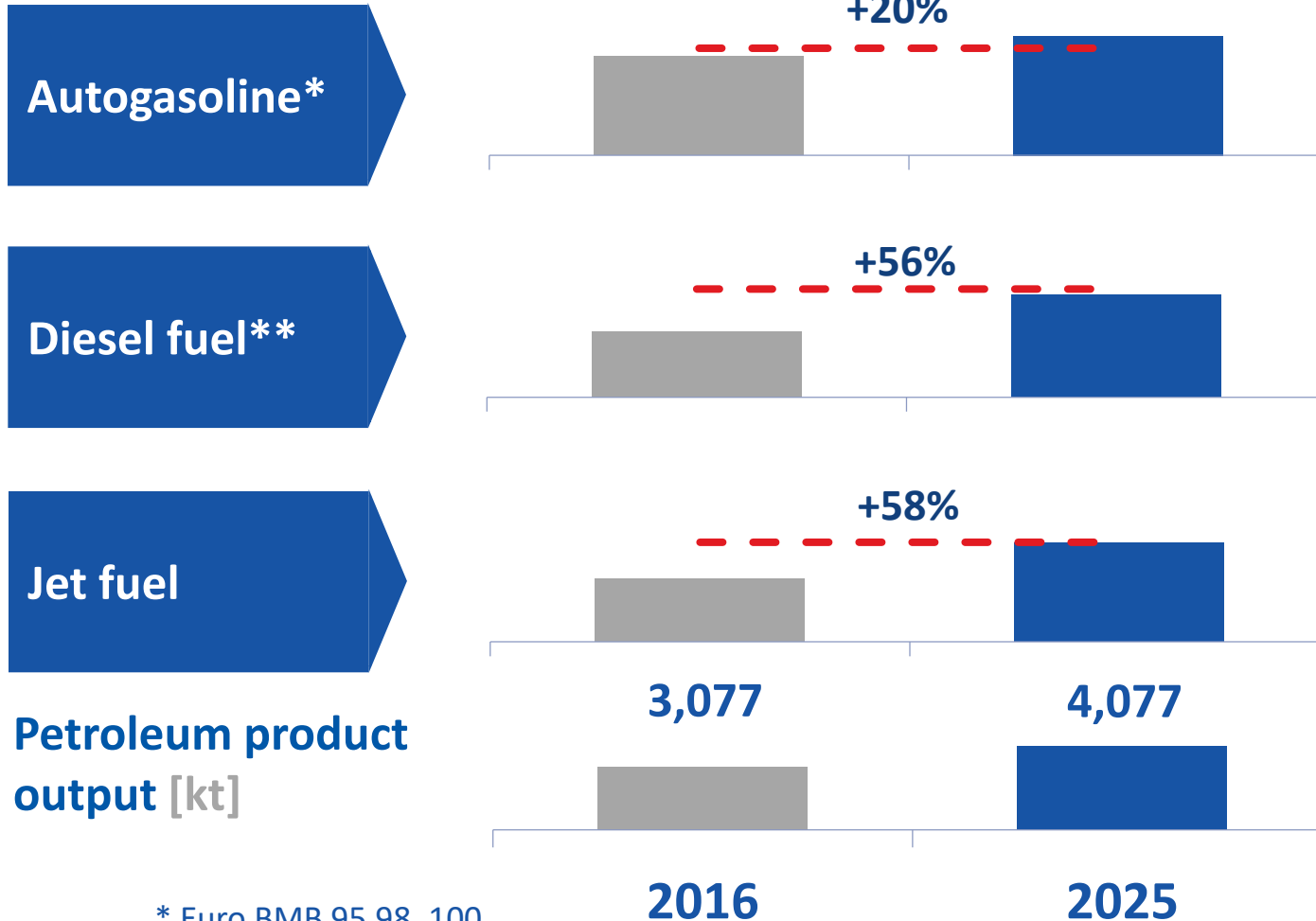


The delayed coking unit (DCU), by refining the vacuum residue, will allow to discontinue the production of fuel oil, increase the refining depth and economic efficiency of the Refinery; it will also open up new opportunities for refining new types of crude, including heavy crude.

*VGP, isobutane, MTBE, pyrolysis gasoline, polymer for bitumen, hydrogen

Main market niches will be covered by Pančevo Refinery products

Pančevo Refinery, [kt]



- Actual output of the Refinery (2016)
- Projected output in 2025 according to Strategy
- Market niches 2025***

Market niches of NIS have been adjusted with consideration given to the following factors:

- Increase in market niches of motor gasoline and diesel fuel relative to the 2016 results through a planned expansion of the NIS presence in its own assets across the region, and by increasing the export of additional volumes
- Growth in the market niche of jet fuel has been based on the Sales Block's jet fuel sale plans in the region

Additional volumes of petroleum products will be sold in Serbia, Bosnia & Herzegovina, Romania and Bulgaria

* Euro BMB 95,98, 100

** Euro diesel, bunkering fuel

*** Market niches 2025 for gasoline and diesel fuel include bio-components

Regional overview

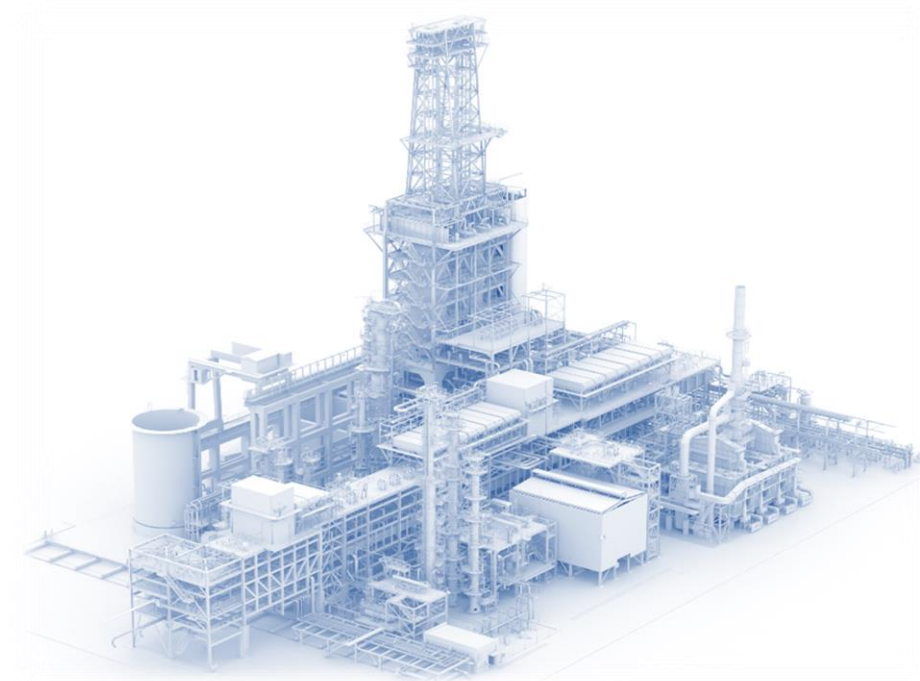
Most of regional competitors choose to build their own DCUs

Majority of refineries in the region have already implemented their own bottom-of-the-barrel projects

Refinery	Capacity, Mln t	Bottom-of-the-barrel solution
Duna	8.1	• DCU
Bratislava	6.1	• Hydrocracking LC-finishing
Rijeka	4.5	• No. Plan is to build a DCU. Construction is planned to start in 2022
Sisak	2.2	• No
Burgas	9.8	• Hydrocracking of the residue using the H-oil technology
Ploesti	2.4	• DCU
Petrobrazi	4.2	• DCU
Petromedia	5.0	• DCU
Okta	2.5	• No
Bosanski brod	3.0	• No

Project expectations

- Reaching the maximum EBITDA performance by increasing the refining depth and producing high-margin products, taking into account market opportunities and constraints.
- Discontinuing the production of high-sulphur fuel oil to be able to meet EU environmental standards from 2019
- Maximum utilization of the existing capacities and infrastructure at Pančevo Refinery



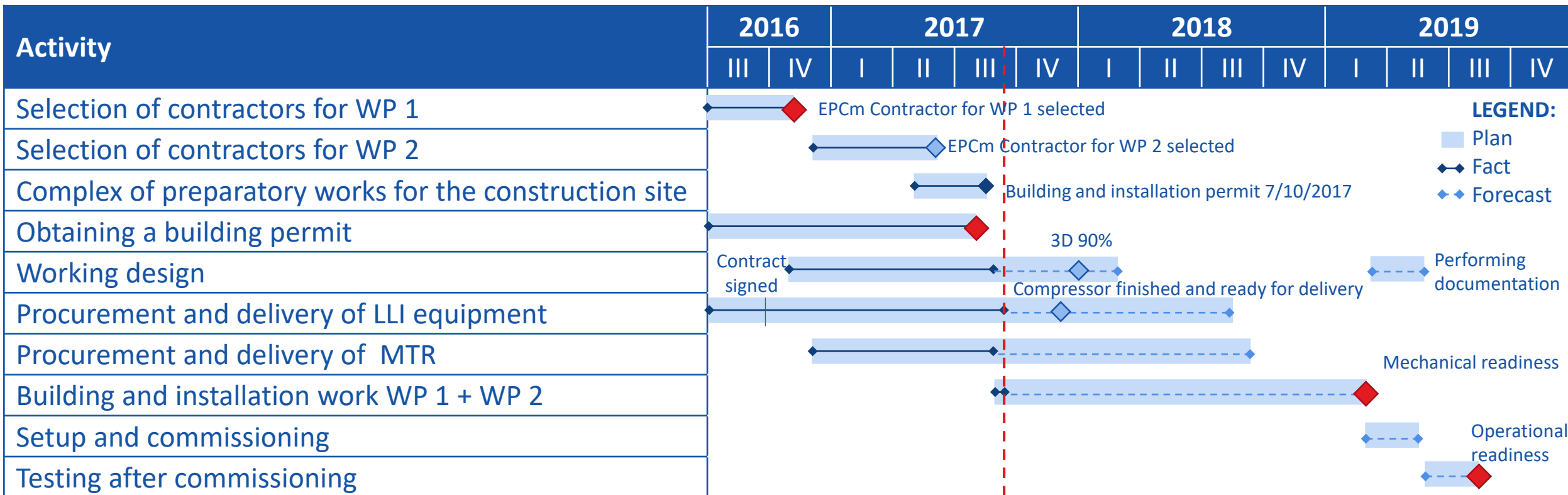
Project milestones

Start of design work	2015
Start of construction	2017
Unit start-up	Q3 2019

Key project parameters

CAPEX	US\$ 330 mn
PI	1.80
PP/DPP	9.1/11.6

Project schedule



Project history:

- Idea and funding approved for the BDP/FEED phases – April 2014
- Completion of FEED – February 2016
- Funding for Execution stage approved – July 2016 (GPN IC).

Key activities performed:

- All essential equipment contracted – August 2016
- EPCm contractors selected – October 2016
- Construction permit obtained – July 2017
- Contractors for construction and metal work have been selected



THANK YOU

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