

POTENTIAL INVESTMENT OPPORTUNITIES IN CONSIDERED SECTORS OF UKRAINIAN ECONOMY









POTENTIAL INVESTMENT OPPORTUNITIES SUMMARY

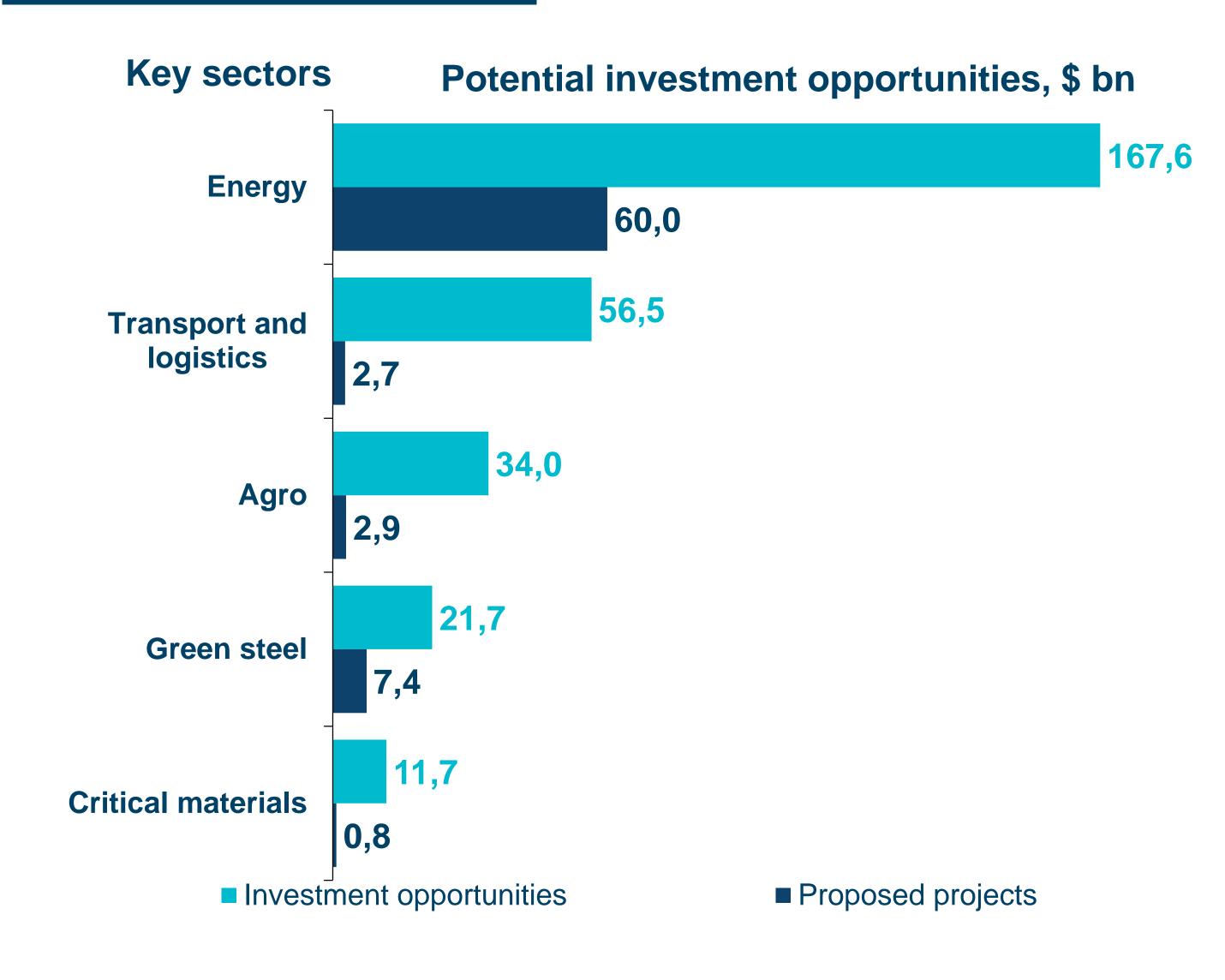


- The potential investment opportunities in the considered sectors of the economy (energy, green steel, transport and logistics, agricultural industry and critical materials) in 2024-2033 is \$292 bn
- At the same time, in Ukraine there is a shortage of projects ready for implementation by business (both private and public sectors). According to the KSE analysis, business needs financing for the implementation of projects with a total cost of \$74 bn. The current gap between potential and announced projects is \$218 bn
- Summary of projects structure:
 - The biggest potential investment opportunities concentrated in 3 sectors: Energy \$167.6 bn (57%), Transport and Logistics \$56.5 bn (19%) and Agro-industrial complex \$34 bn (12%)
 - Most investment projects were submitted by businesses from 3 sectors: Energy \$60.0 bn (81%), Green Steel \$7.4 bn (10%) and Agro-industrial complex \$2.9 bn (4%)
 - In terms of the number of projects by sector the most projects are in Energy 201, Transport and logistics 73, Agro-industrial complex 82. In Green steel 46, Critical materials 9
 - The average cost of projects by sector (from business): Energy \$298m, Green Steel \$161m, Critical materials \$88m, Transport and Logistics \$37m, Agro-industrial complex \$36m

These materials were developed under the Good Governance Fund Project "Economic Hub: Sound PFM Policies and Vision for Growth" which is supported by the UK Government (UK International Development). The project delivery partners are Abt Britain and Kyiv School of Economics.

INVESTMENT OPPORTUNITIES – \$292 BN. PROPOSED INVESTMENT PROJECTS – \$74 BN (GAP -\$218 BN)





Highlights

- Business projects align with the government's goals in energy development but have notable gaps in wind, bioenergy, biomethane, nuclear, solar, and peaking power (GAP: -\$107.6 bn)
- The Government is focusing on enhancing transport infrastructure for increased export potential. PPP projects are in progress for railroads, trans connectors, sea and river transport, air transport, highways, etc. (GAP: -\$53.8 bn)
- Boosting value-added product manufacturing, revamping irrigation systems, and advancing fertilizer, plant protection, and seed production for farmers' needs. The biggest gap is in the irrigation and agrochemical subsectors (GAP: -\$31.1 bn)
- The development of DRI/HBI production and the increase of green steel production capacity without the use of coking coal and natural gas due to the transition to green hydrogen and green electricity (GAP: -\$14.3 bn)
- Investment potential for extraction and processing of critical and strategic raw materials (lithium, titanium, uranium, tantalum etc.) (GAP: -\$10.9 bn)



ENERGY (1/3) INVESTMENT OPPORTUNITIES – \$167.6 BN



65,7

Key energy subsectors development by 2033

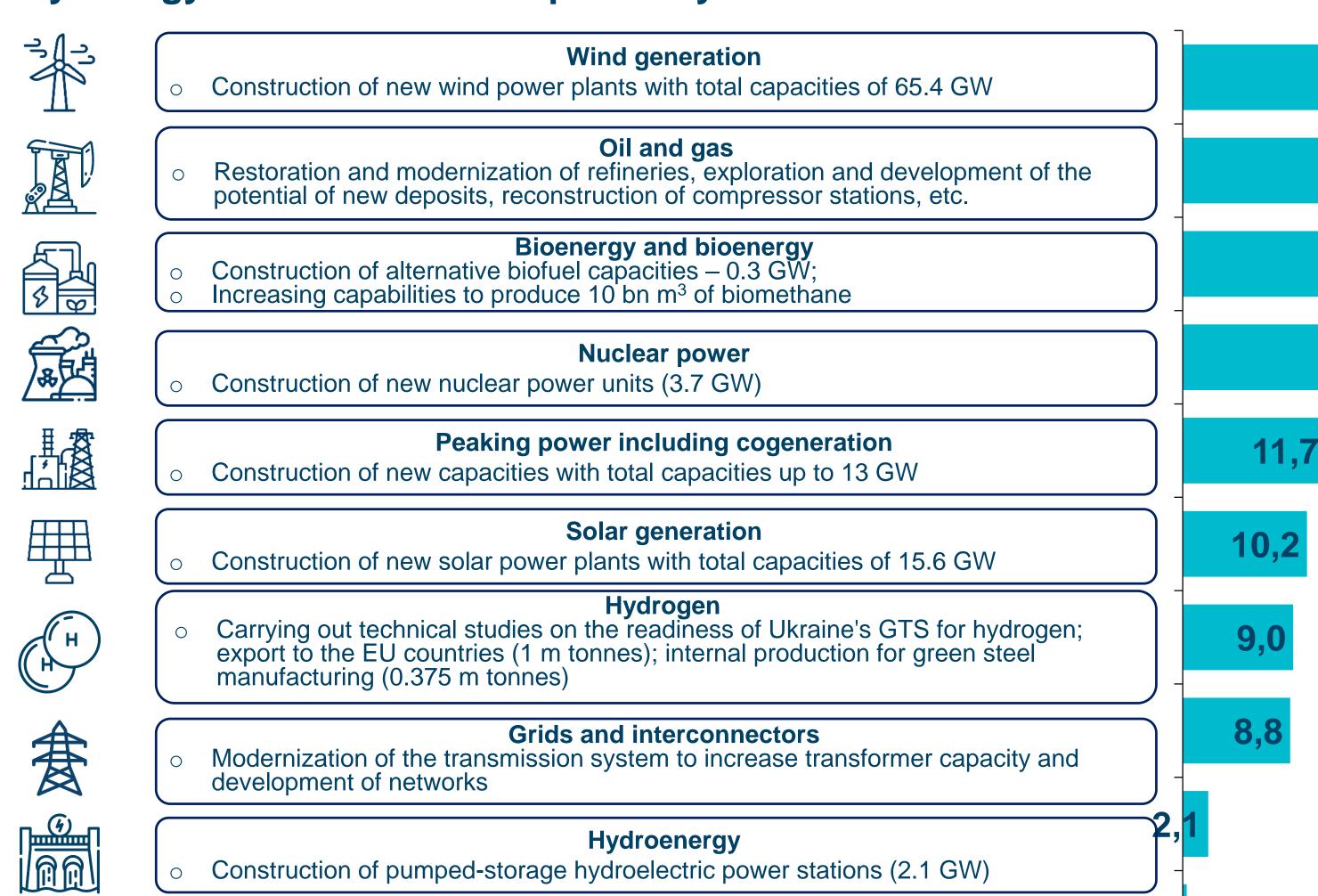
Construction and instalment of 0.5 GW

Potential investment opportunities, \$ bn

20,6

20,6

18,6



Storages

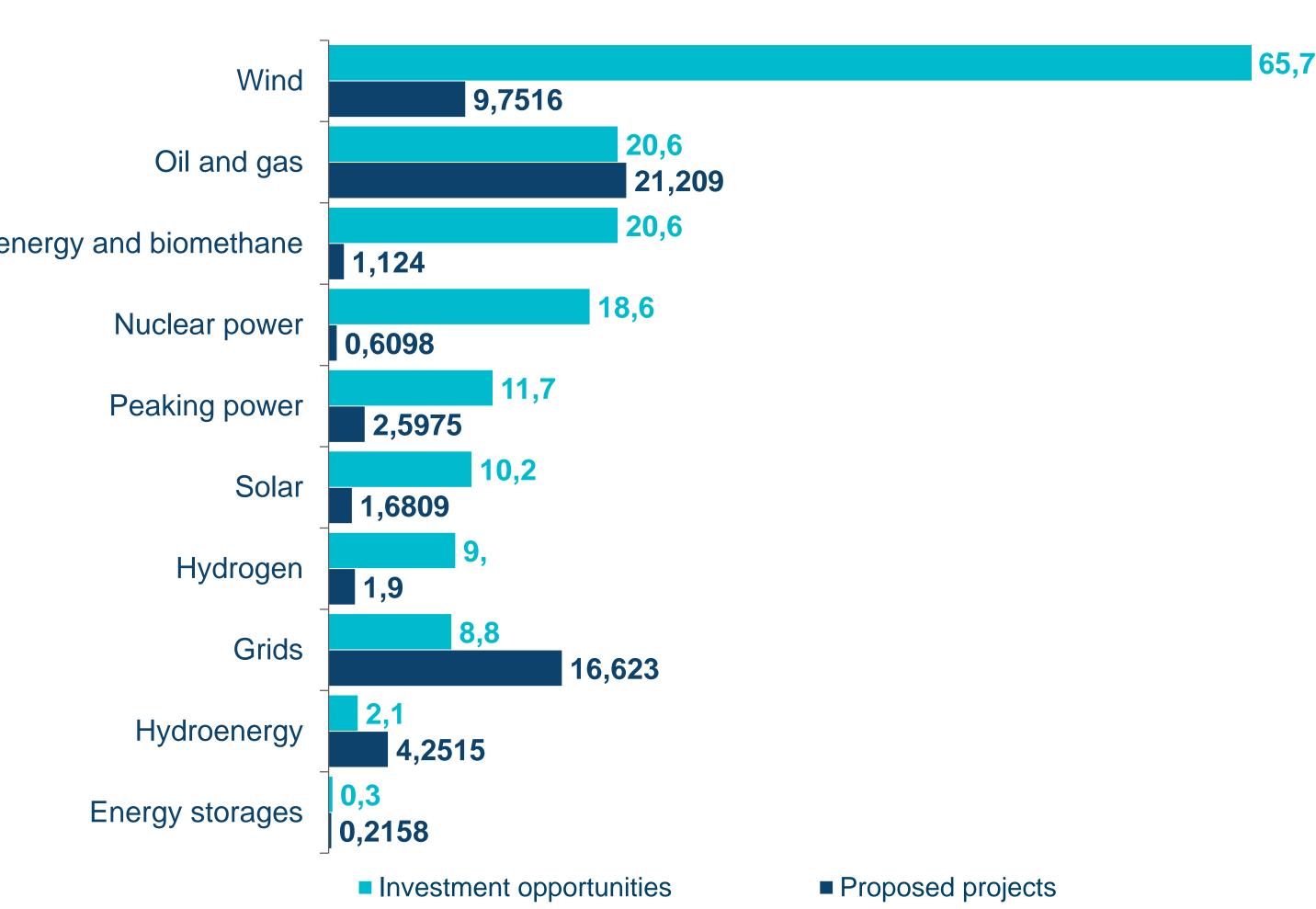
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ENERGY (2/3) PROPOSED INVESTMENT PROJECTS – \$60.0 BN



Key subsectors

Potential investment opportunities, \$ bn

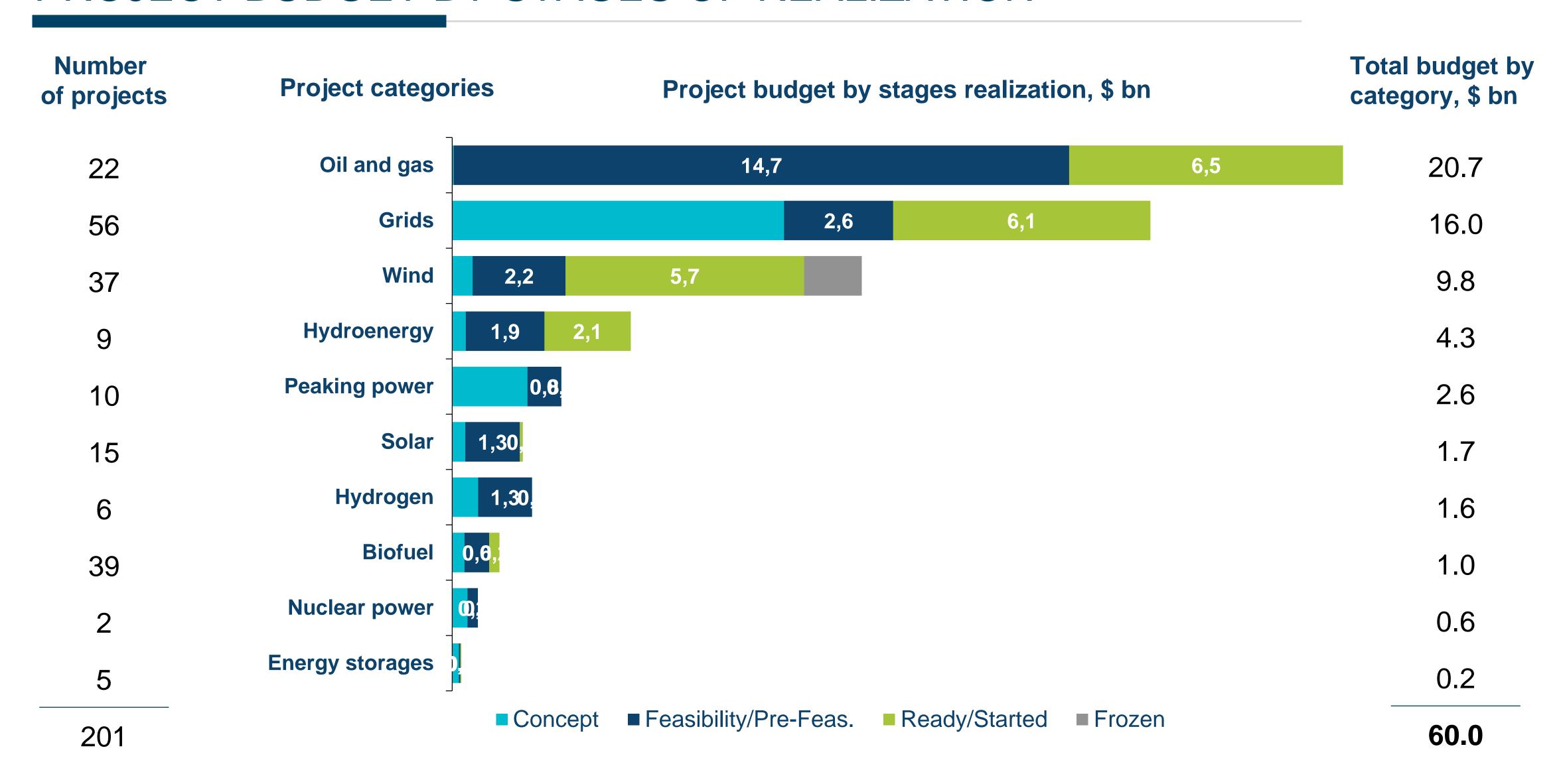


Highlights

- The government is expected to build 65.4 GW of WPPs in next 10 years, whereas businesses have only submitted proposals for ~8 GW (Gap: -\$55.9 bn)
- Businesses have matched almost all sector future development needs (Gap: +\$0.6 bn)
- Business plan to construct various plants to produce biomethane, biogas, and bioethanol using agricultural waste as a main resource with total (19 biomethane projects >145 m tonnes); 3 projects for bioenergy plants (~ 30 MW) (Gap: -\$19.5 bn)
- Businesses provide projects for development of nuclear fuel thereby ensuring the full potential of the sector remains untapped (Gap: -\$18.0 bn)
- The Government is expected to build 13.1 GW of peaking power plants in next 10 years, whereas businesses have only submitted proposals for 1.5 GW (Gap: -\$9.1 bn)
- The Government is expected to build 15.6 GW of SPPs in next 10 years, whereas businesses have only submitted proposals for 2 GW (Gap: -\$8.5 bn)
- Businesses want to create of green hydrogen and ammonia valley in Ukraine with simultaneously hydrogen development for green steel production (Gap: -\$7.1 bn)
- Government of Ukraine mainly urged on interconnectors development and grids modernization while businesses proposals were aimed on grids reconstruction, modernization and digitation in Kyiv, Odesa and Dnipro regions (Gap: +\$7.8 bn)
- Ukrhydroenergo has submitted more than 95% of all hydro projects covering all sector future needs (Gap: +\$2.2 bn)
- Ukraine plans to install 0.5 GW of energy storages while business' projects aimed to construct small-scale energy storages with a total capacity of ~85 MW (Gap: -\$0.1 bn)

ENERGY (3/3) PROJECT BUDGET BY STAGES OF REALIZATION

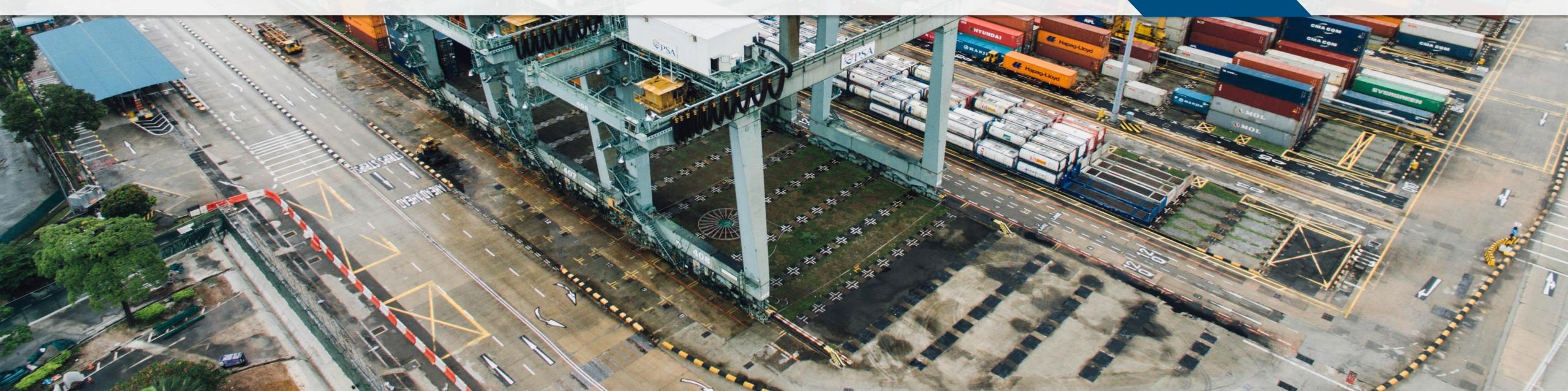






TRANSPORT AND LOGISTICS





TRANSPORT AND LOGISTICS (1/3) INVESTMENT OPPORTUNITIES – \$56.5 BN



Key transport and logistics subsectors development by 2030



Road infrastructure

- 24.0 thousand km of state roads were built and renovated
- 1.6 thousand artificial structures were built and renovated



Railway transport

- 20.0 thousand wagons were put into operation
- o reach 400 million tons of freight transportation per year



Air transport

- development of the network of regional airports
- reach 20 million passenger per year



Public transport

- electrification of public transport
- 20 new metro stations were built in Ukrainian cities



Sea and river transport

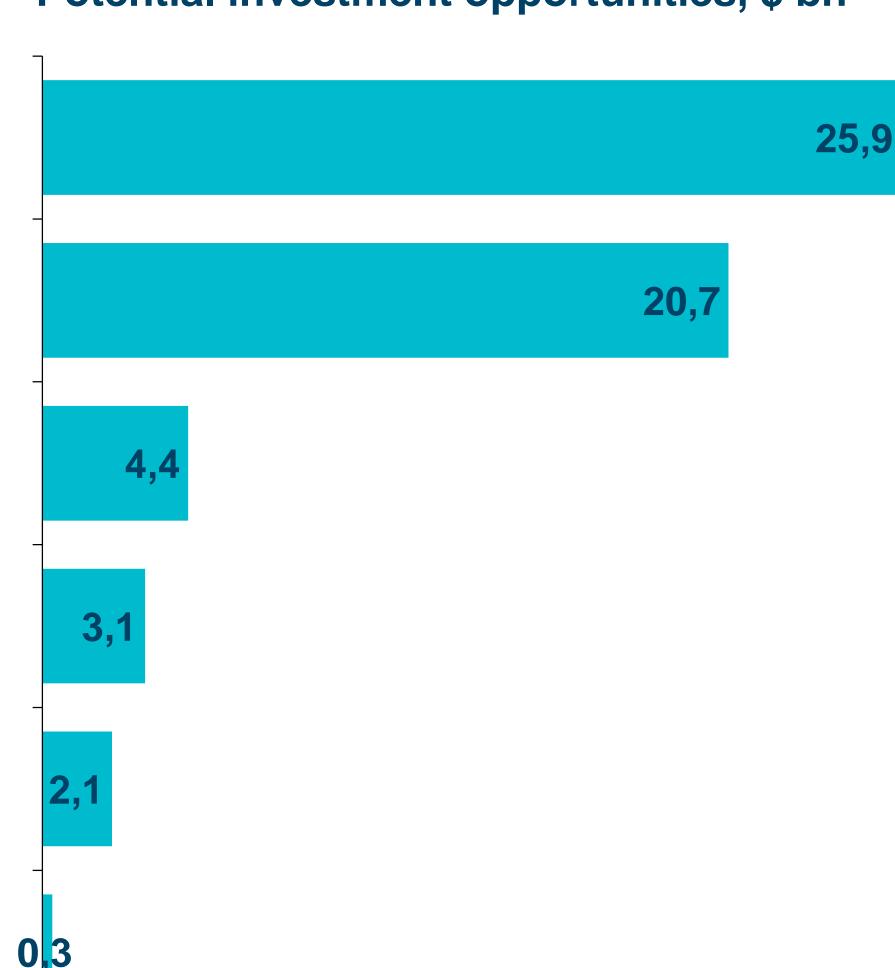
- o development of the Danube cluster
- o reach 60 million tons of cargo per year on the river Dnipro



Export logistics

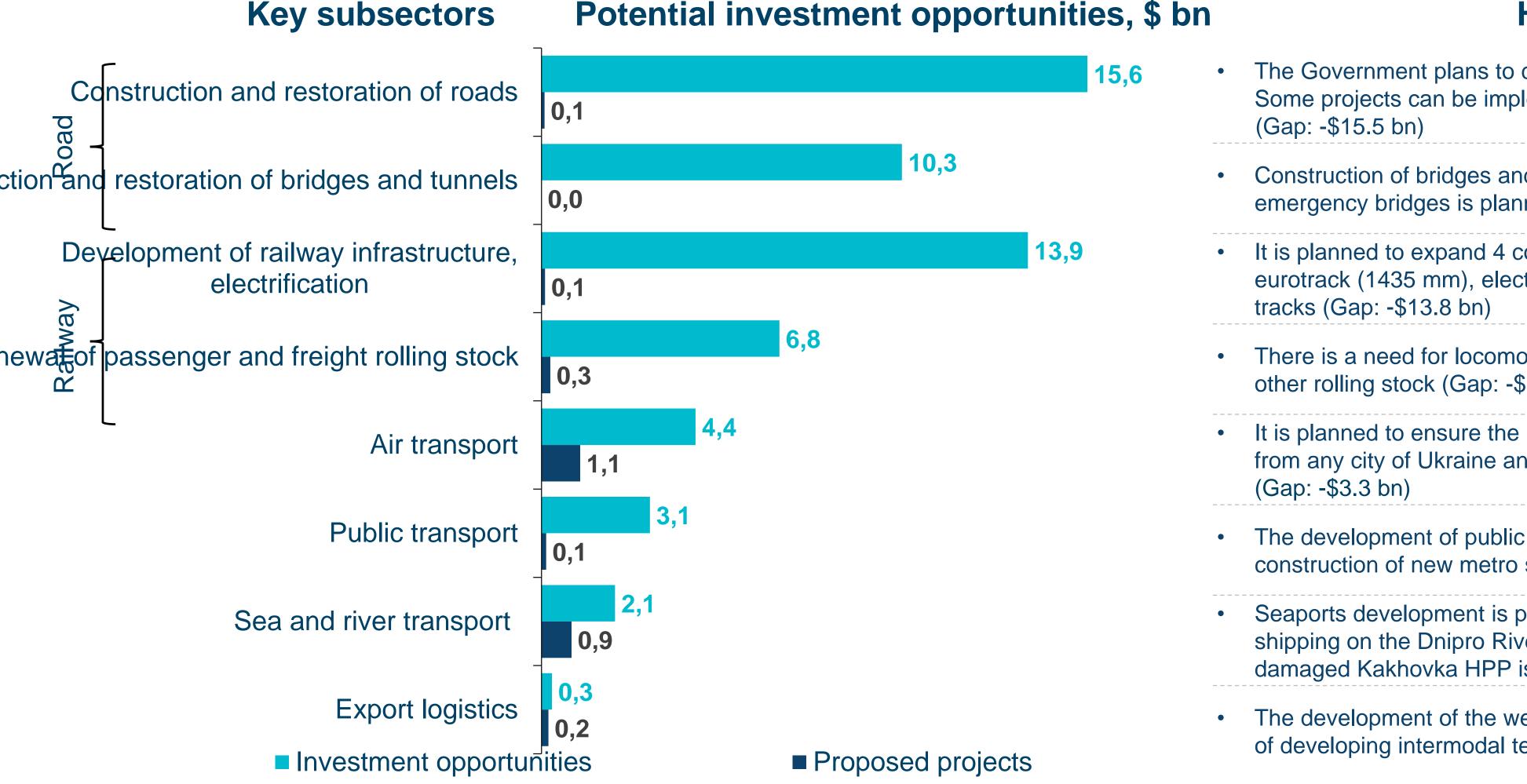
- arrangement of international checkpoints
- development of intermodal terminals

Potential investment opportunities, \$ bn



TRANSPORT AND LOGISTICS (2/3) PROPOSED INVESTMENT PROJECTS – \$2.7 BN



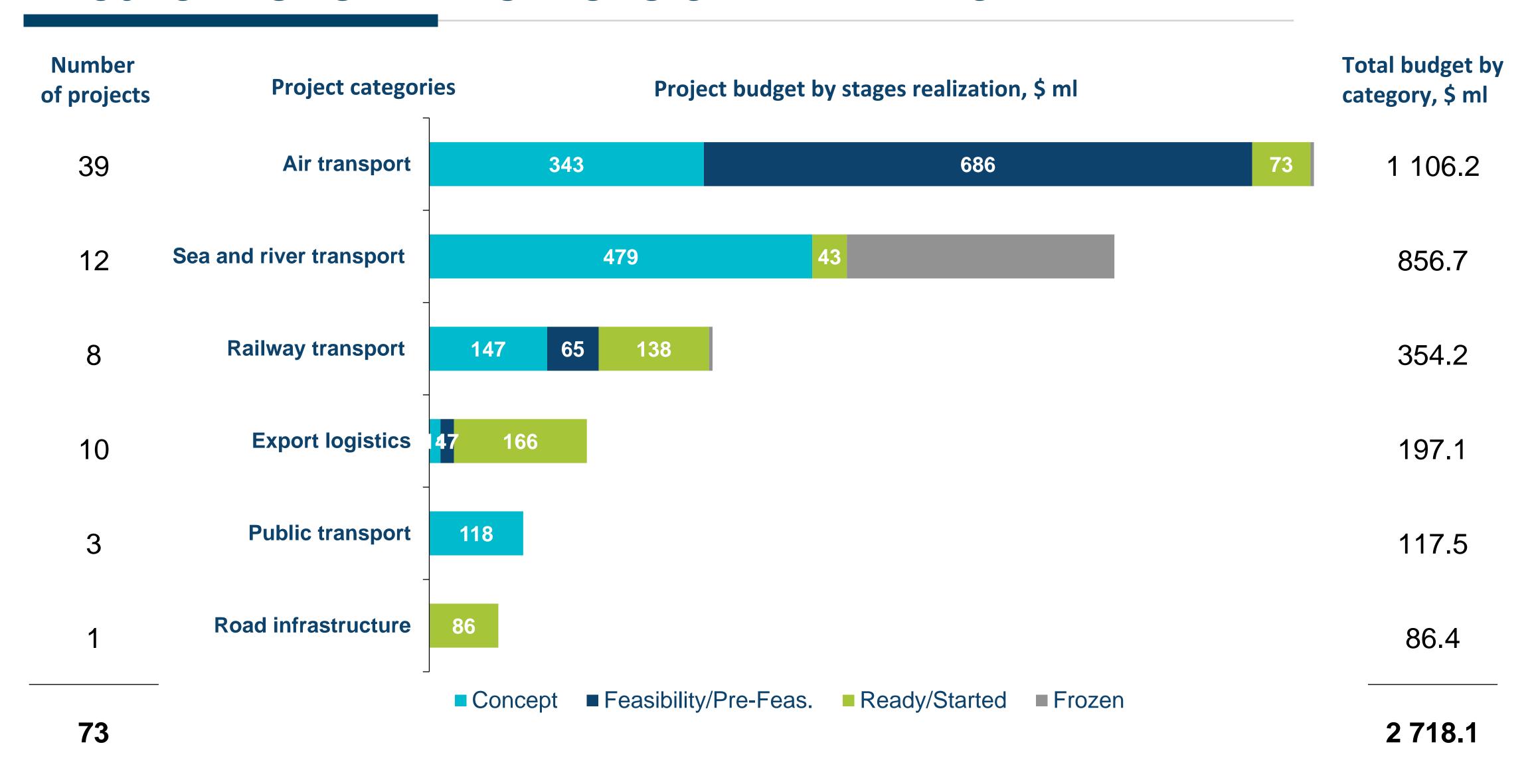


Highlights

- The Government plans to connect the highways all regional centers. Some projects can be implemented on PPP terms (Gap: -\$15.5 bn)
- Construction of bridges and tunnels, restoration of 83 destroyed and emergency bridges is planned (Gap: -\$10.3 bn)
- It is planned to expand 4 corridors of the Ten-T network with eurotrack (1435 mm), electrification of 1.5 thousand km of railway tracks (Gap: -\$13.8 bn)
- There is a need for locomotives, freight and passenger cars and other rolling stock (Gap: -\$6.5 bn)
- It is planned to ensure the presence of airports in the radius 200 km from any city of Ukraine and creation of a European repair hub (Gap: -\$3.3 bn)
- The development of public electric transport in Ukrainian cities, the construction of new metro stations is planned (Gap: -\$3.0 bn)
- Seaports development is planned under PPP terms. To revive shipping on the Dnipro River, addressing the aftermath of the damaged Kakhovka HPP is essential (Gap: -\$1.2 bn).
- The development of the western crossings is underway with the aim of developing intermodal terminals (Gap: -\$0.1 bn)

TRANSPORT AND LOGISTICS (3/3) PROJECT BUDGET BY STAGES OF REALIZATION







AGRO-INDUSTRIAL COMPLEX (1/4) INVESTMENT OPPORTUNITIES – \$34 BN



Key agro-industrial subsectors development by 2033

Infrastructure

- Construction of an irrigation systems for 2 million hectares of land
- Construction and restoration of 677 elevators with capacity 27.4m t



Horticulture

- Greenhouse complexes, 60 thousand ha of gardens, 50 processing complexes
- 12 plants for production 9m planting units



Agrochemistry

- 12 modern plants with a total production capacity of 450 thousand tons of PPPs
- Construction and renovation of 7 plants of nitrogen and 8 complex fertilizers



Lifestock

- Increase in milk production 8.8 million tons 11 million tons
- o renovate 100 thousand m2 cold warehouses



Processing

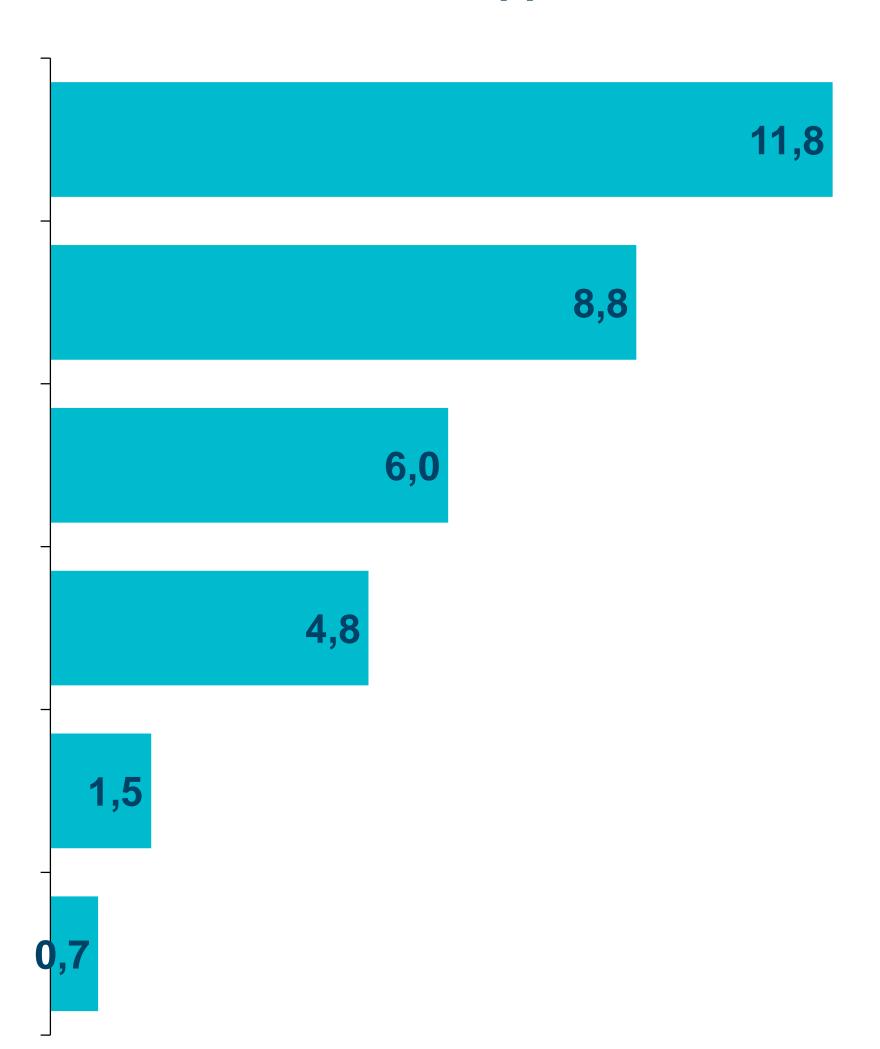
- 3 modern plants and 20 production lines at existing plants
- 2 production plants of corn starch with capacity 180 th t



Machinery & equipment

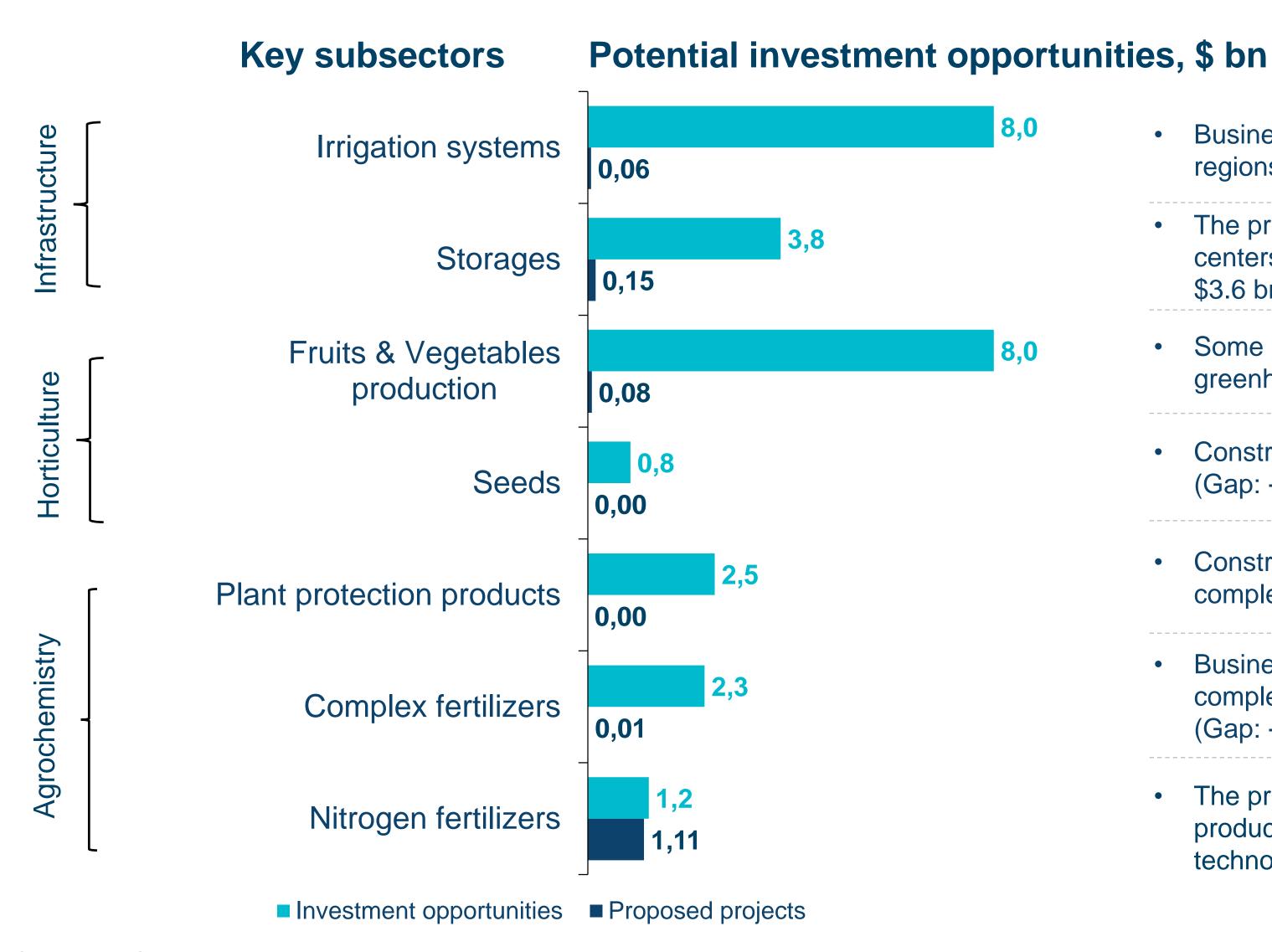
- 2 motor vehicle plants with a capacity of 1.500 units
- 6 factories of trailed equipment with capacity 10.000 units

Potential investment opportunities, \$ bn



AGRO-INDUSTRIAL COMPLEX (2/4) PROPOSED INVESTMENT PROJECTS (1/2) – \$2.9 BN





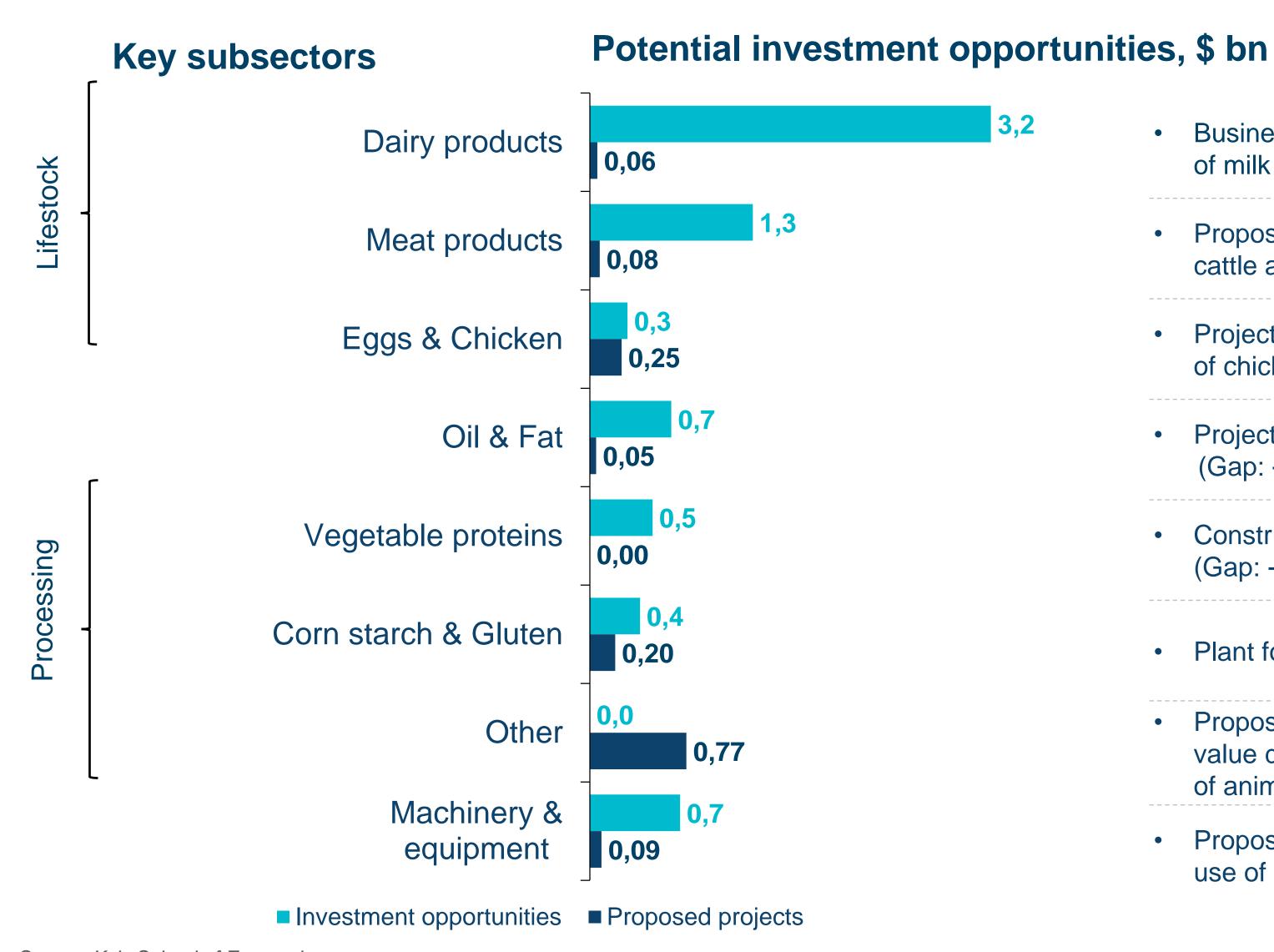
Highlights

- Business proposed modernization of irrigation systems in southern regions (Gap: -\$7.9 bn)
- The proposed projects are increase of capacities of the fleet, logistics centers and the develop of the network of elevator complexes (Gap: -\$3.6 bn)
- Some of the proposed projects relate to the development of greenhouse systems (Gap: -\$7.9 bn)
- Construction of plants for production of 9m planting units is planned (Gap: -\$0.8 bn)
- Construction of 10 plants for production of 250 th t and 2 modern complex with R&D centers is planned (Gap: -\$2.5 bn)
- Business proposed investment project for the construction of a complex for the storage and production of solid and liquid fertilizers (Gap: -\$2.3 bn)
- The proposal from business was to build an enterprise for the production of nitrogen fertilizers and to introduce the latest technologies (Gap: -\$0.1 bn)

Source: Kyiv School of Economics

AGRO-INDUSTRIAL COMPLEX (3/4) PROPOSED INVESTMENT PROJECTS (2/2) – \$2.9 BN





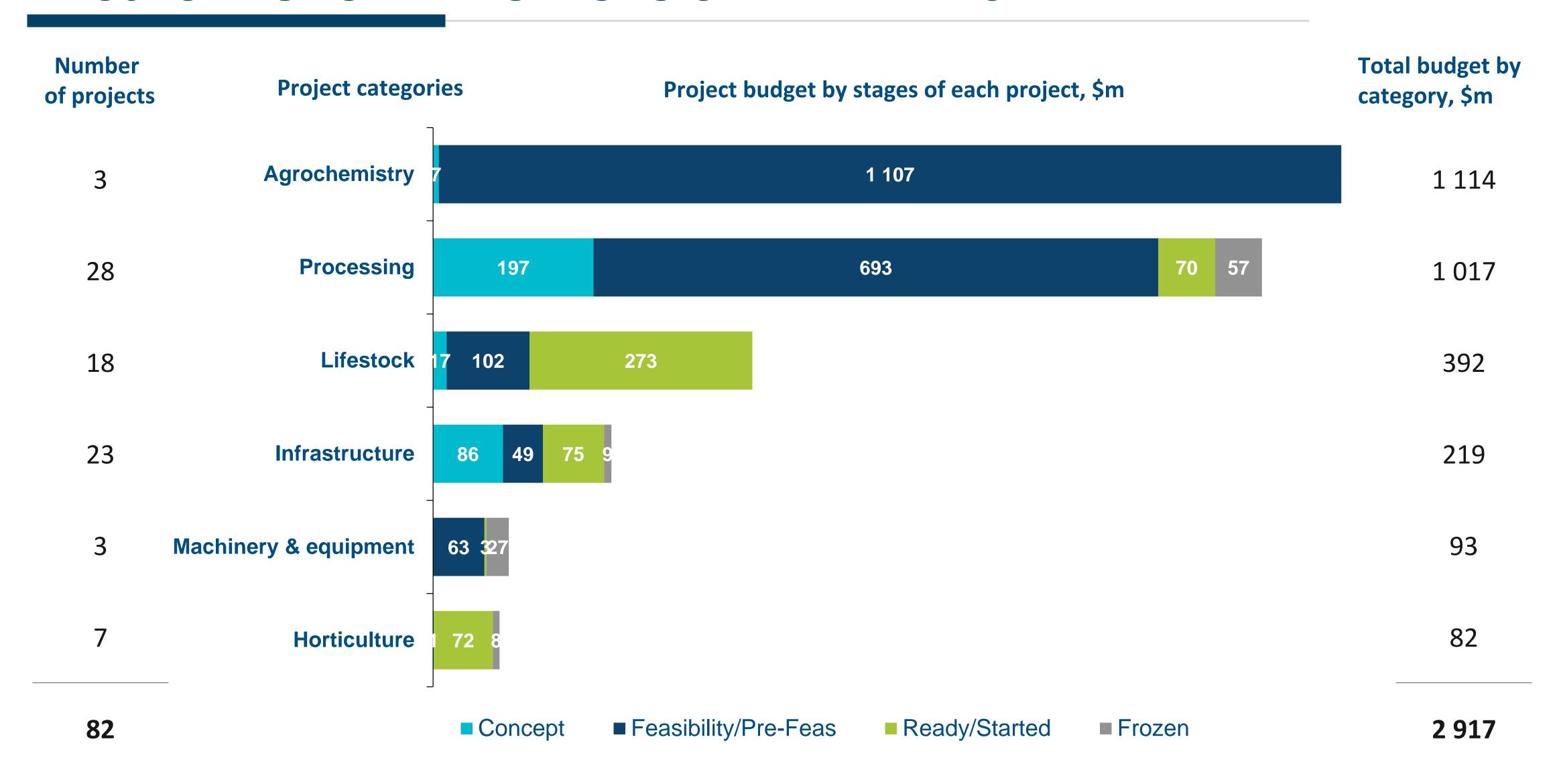
Highlights

- Business proposed projects for the possibility of production and storage of milk and dairy products (Gap: -\$3.1 bn)
- Proposed expansion and modernization of assets for the production of cattle and pork products (Gap: -\$1.2 bn)
- Projects for construction and modernization of assets for the production of chicken products (Gap: -\$0.05 bn)
- Projects for the construction of oil processing enterprises (Gap: -\$0.6 bn)
- Construction of 2 plants for production of 1m t of proteins is planned (Gap: -\$0.5 bn)
- Plant for deep processing of corn into lactic acid (Gap: -\$0.2 bn)
- Proposed projects provide for processing of flour, increasing the added value due to the processing of fish, honey, and processing of products of animal origin unfit for human consumption (Gap: +\$0.8 bn)
- Proposed projects involve updating, modernization and more efficient use of agricultural machinery (Gap: -\$0.6 bn)

Source: Kyiv School of Economics

AGRO-INDUSTRIAL COMPLEX (4/4) PROJECT BUDGET BY STAGES OF REALIZATION







GREEN STEEL (1/3) INVESTMENT OPPORTUNITIES – \$21.7 BN



Key green steel subsectors development by 2033



Green Steel

Up to 12.5 million tons per year of green steel and metallurgical products



Hot briquetted iron (HBI) or Direct reduced iron (DRI)

Up to 15 million tons per year of HBI and DRI



Mining and processing plant

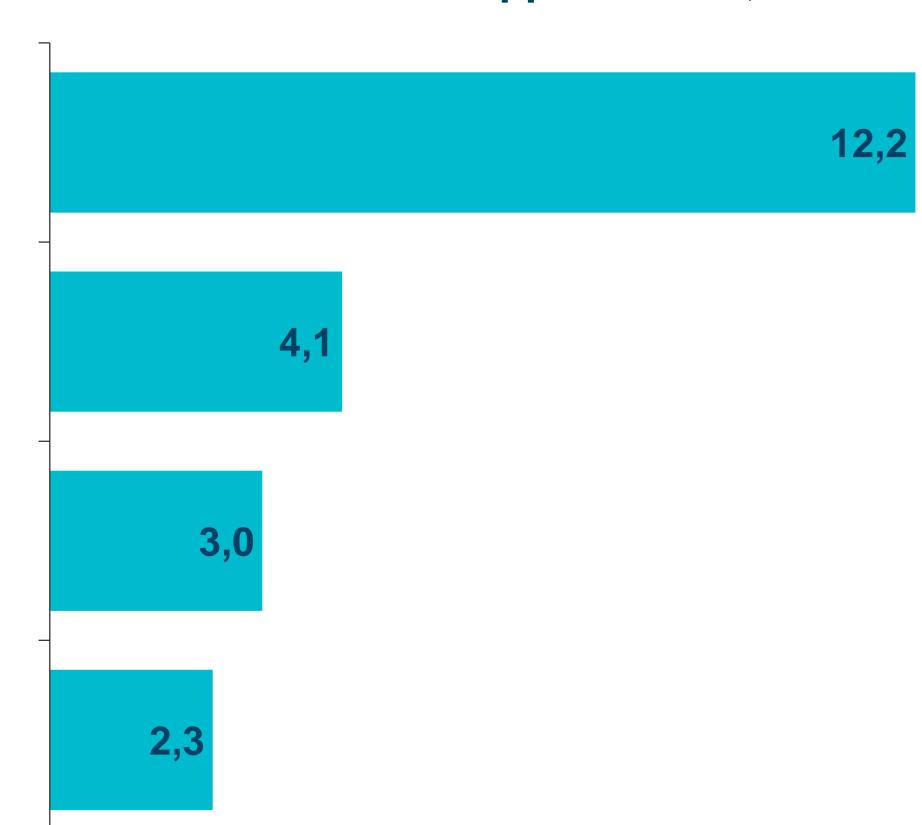
Restoration of production of iron ore raw materials - up to 80 million tons per year



Ferroalloys and Limestone

 Production of ferroalloys (alloying additives) and limestone to ensure the technological process of steel production and cleaning of emissions

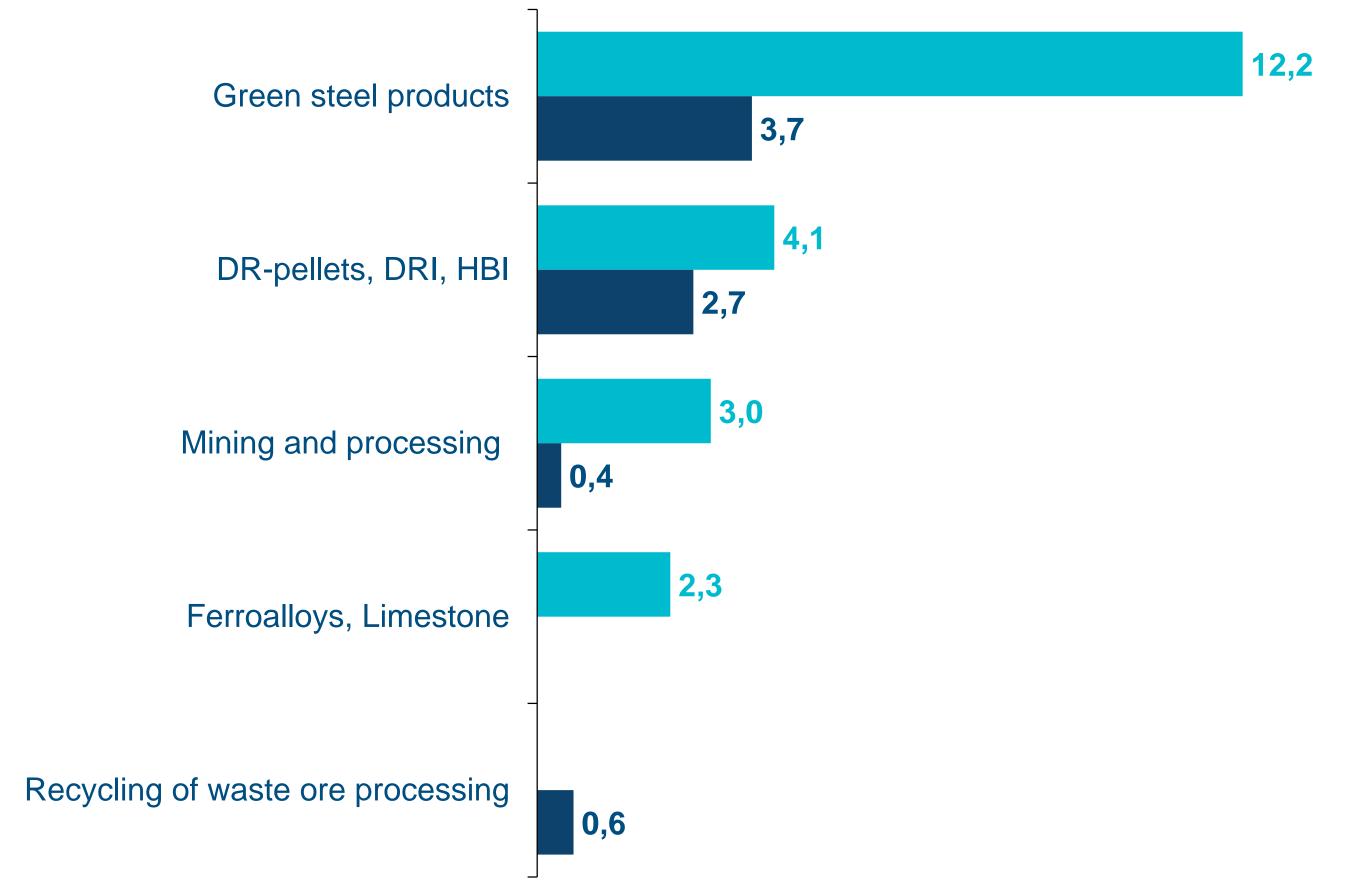
Potential investment opportunities, \$ bn



GREEN STEEL (2/3) PROPOSED INVESTMENT PROJECTS – **\$7.4 BN**







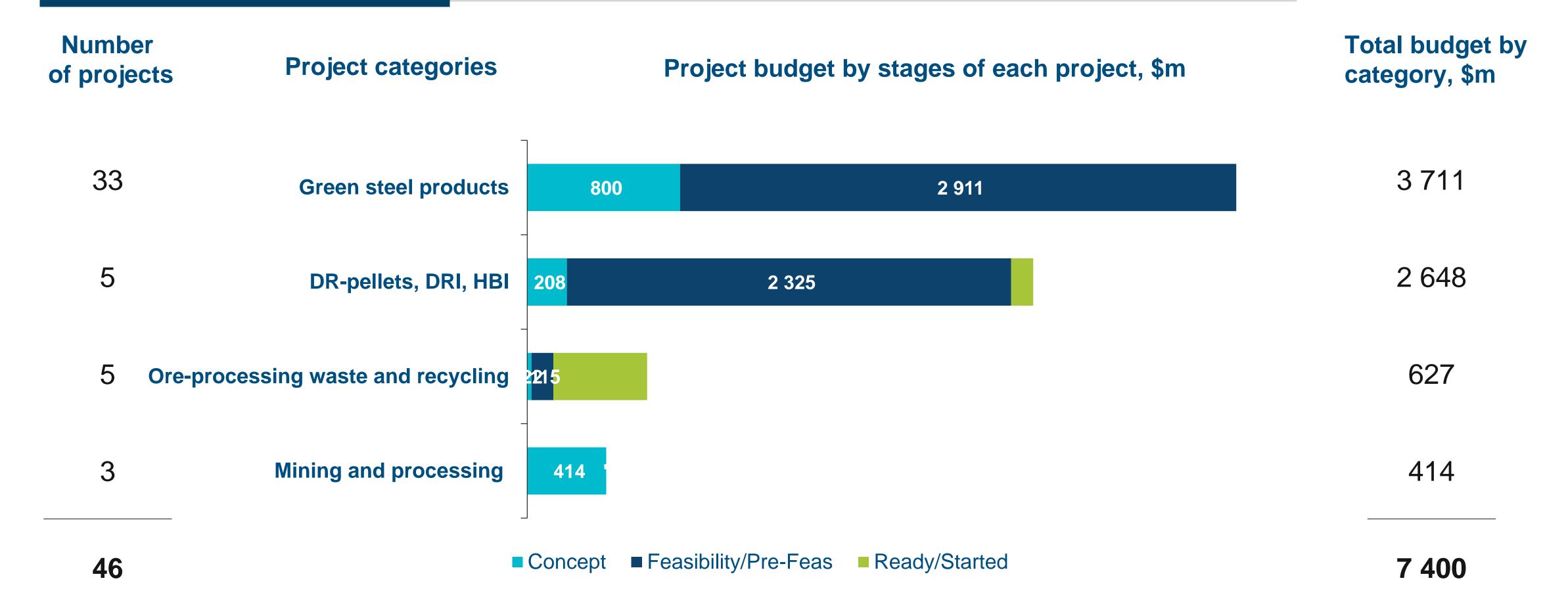
Highlights

- Business proposed to replacement of OHF (open hearth furnace) steel production with EAF (electric arc furnace) for production of low carbon steel from scrap metal and DRI/HBI. It is planned to increase production volume of steel products to 12.5m tons per year (Gap: -\$8.5 bn)
- It is planned implementation projects to increase production volume DR-class pellets, HI and DRI products (Gap: -\$1.4 bn)
- The business proposed Investing to electric dump trucks and electric locomotives instead of diesel ones, which reduces CO2 emissions (Gap: -\$2.6 bn)
- Production of ferroalloys (alloying additives) and limestone to ensure the technological process of steel production (Gap: -\$2.3 bn)
- The business proposed a change in technology: Water management in ore-processing; tailings dam of ore-processing waste and their recycling (Gap: +\$0.6 bn)

■ Investment opportunities
■ Proposed projects

GREEN STEEL (3/3) PROJECT BUDGET BY STAGES OF REALIZATION

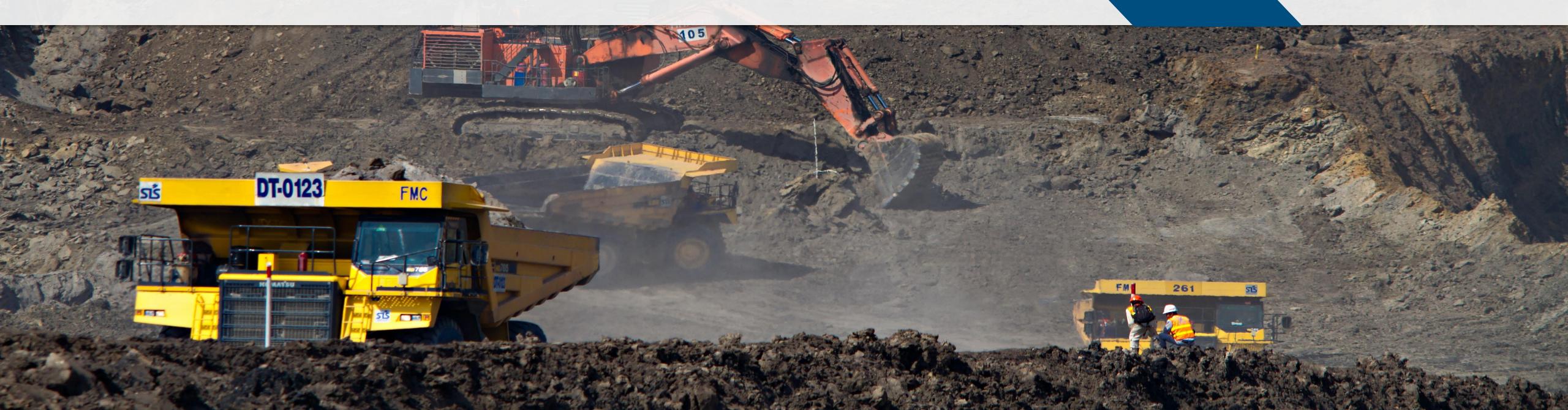






CRITICAL MATERIALS





CRITICAL MATERIALS (1/3) INVESTMENT OPPORTUNITIES – \$11.7 BN



Key critical materials subsectors development by 2033



Lithium

Declared mining and processing projects on Polokhivske and Shevchenkivske deposits



Titanium

Expansion of the raw material base on Mezhirichne, Likarivske, Yurivska site deposits



Uranium

Projects of the development of the for the extraction and processing of uranium



Rare earth materials

Extraction and processing of tantalum, niobium on Malyshevskoe deposit



Graphite

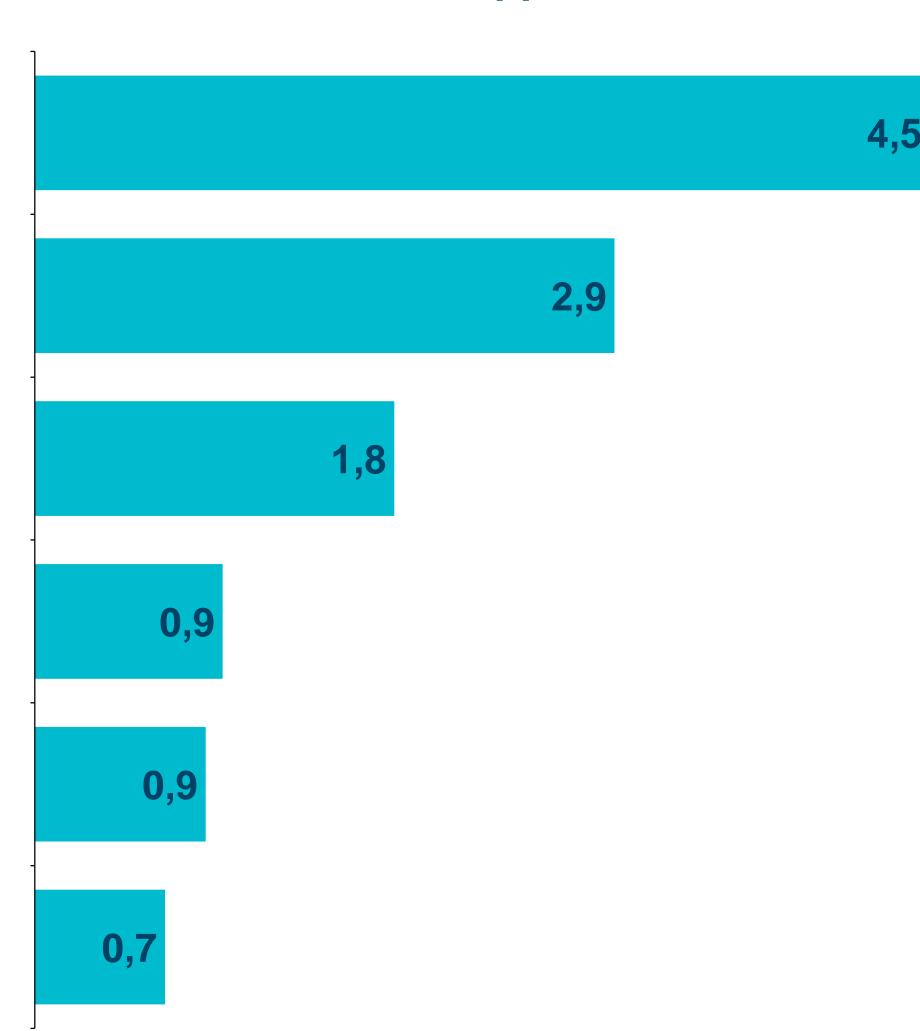
Extraction and processing Zavalyvskoye deposit



Polymetals

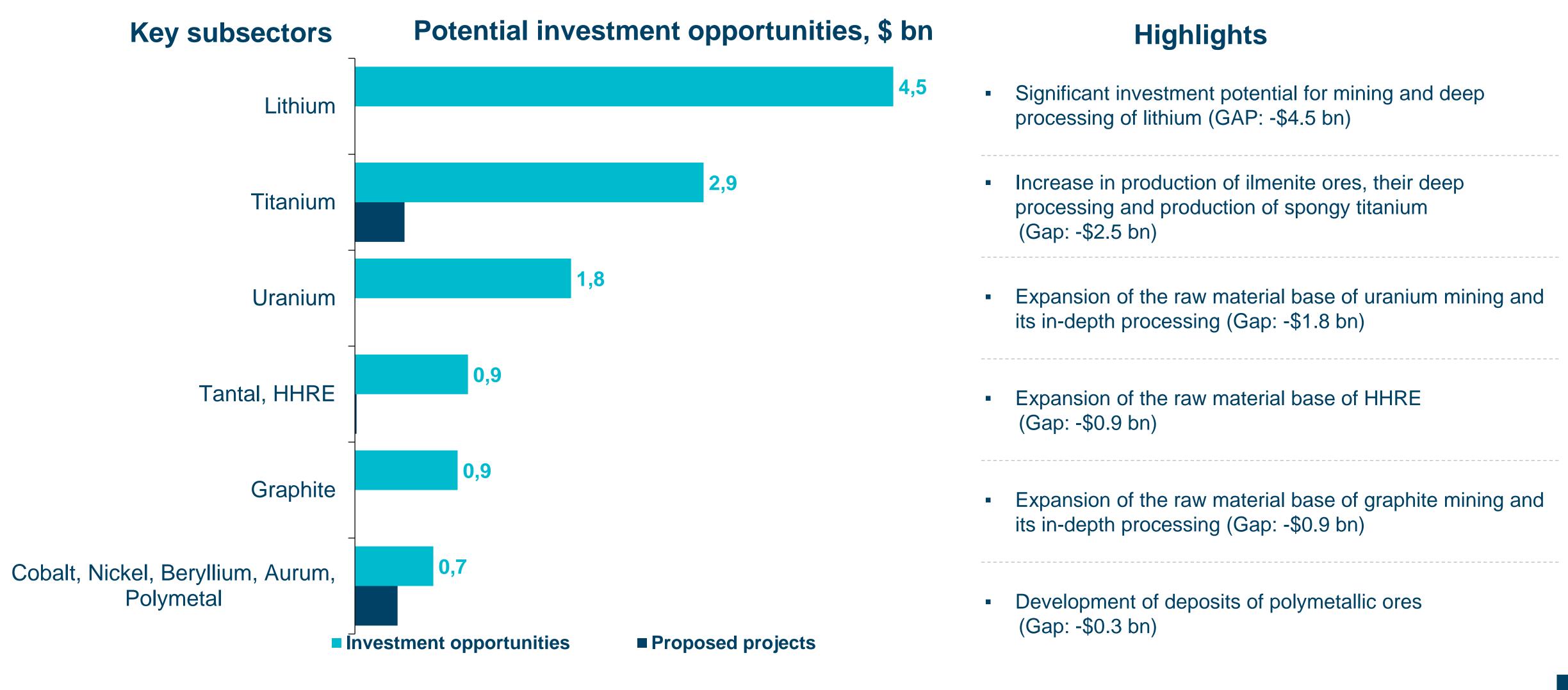
 Mining and processing of polymetals and gold on Muzhiivske deposit

Potential investment opportunities, \$ bn



CRITICAL MATERIALS (2/3) PROPOSED INVESTMENT PROJECTS – **\$0.79 BN**





CRITICAL MATERIALS (3/3) PROJECT BUDGET BY STAGES OF REALIZATION



