

Strategic Update 2020 Results

FEBRUARY 2021





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**Our commitment:
decarbonisation**



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**Results
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**2021-2026
Strategic Update**



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**Roadmap
2025-2040**



01

Our commitment: decarbonisation

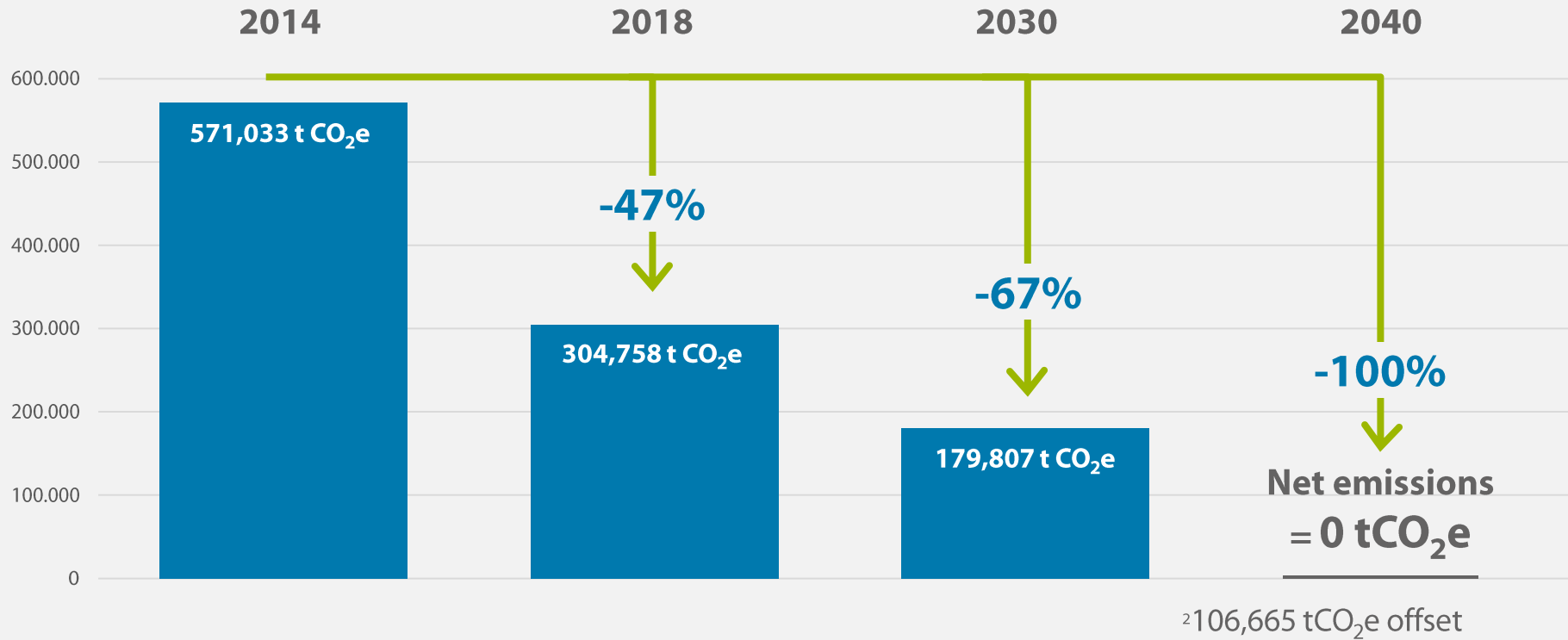
New target: Carbon neutrality by 2040

More than 50
specific energy efficiency
projects

In line with the European Union emission reduction target (-55% by 2030 vs 1990), and with the reduction achieved in 2020, Enagás brings the carbon neutrality target forward to 2040

Our commitment: decarbonisation

New challenge: carbon neutrality by 2040



The company has reduced emissions in the 2018-2020 period by **30%**

¹Targets that include the Global Methane Alliance's commitment to reduce methane emissions and are defined according to Science Based Targets criteria (the latter have been defined taking 2018 as the base year).

² In 2040 the reduction reaches 81% compared to 2014 and carbon neutrality is reached.



Global Methane Alliance



DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Strategy

Reduction

of emissions prioritising the implementation of measures with greater impact

Offsetting

subsequent emissions that technically cannot be reduced

- Improve operational efficiency at machine and system level with **new technologies**.
- Use **gas of renewable origin** for self-consumption of natural gas.
- Solutions for carbon **capture and storage**.
- Study **alternatives** to achieve carbon neutrality at points where the above options are not possible and/or profitable (**offsetting-reforestation**).

Main actions

- Turbocharger renewal plan.
- Improvement of energy efficiency in the operation of the Gas System.
- 100% Guarantees of renewable origin and self-generation.
- Campaigns to detect, quantify and reduce leaks.
- Venting reduction.

> **50**
annual energy efficiency projects

*The strategy takes as reference a combined model of demand scenarios (Global Climate Action, GTS forecasts and PNIEC scenario), considering in each case the most conservative or unfavourable scenario, that is, the one that considers the highest possible demand for each year: 2020, 2025, 2030 and 2040.

ESG commitment

Environmental



- Member of the **A List 2020 CDP** Climate Change
- Setting emission reduction targets aligned with the **1.5°C scenarios: -67% by 2030** vs. 2014 and **carbon neutrality by 2040**
- Reduction of **carbon footprint -31%** in 2020 vs 2018.
- 31 **hydrogen** projects and 16 **biomethane** projects in development.
- **Adherence to the Biodiversity Pact and the Business for Nature call to action**
- **Biodiversity plan** and setting the **no net loss of biodiversity goal**

Social



- Certification of the AENOR **Protocol against COVID-19**.
- Signing of the third **Collective Agreement (2020-2022)**
- Top Employer **certification** for the eleventh year running
- Positioned among the 100 **Best Companies to Work For** in Actualidad Económica ranking
- Third top company in the world in the Bloomberg **Gender Equality Index**
- Renewal of **EFR reconciliation** certification, with the level of **Excellence A**

Governance



- Definition of the **2022 - 2024 remuneration policy**
- Review of the **process for evaluating** the Board of Directors
- Training on the Enagás Group **Ethical Code**
- Update of the **Supplier Code of Ethics**
- Implementation of **Compliance and Corruption Prevention models**
- Certification of the Enagás General Meeting of shareholders as a **sustainable event**

LEADERSHIP IN THE MAIN SUSTAINABILITY INDICES:





02

2020 Results

In the year of a global pandemic with the consequent economic and social crisis

**Targets
met**

**Contribution to energy
security in Spain and in the
countries where the
company operates**

**+5%
net profit**

**Essential service provided
without interruption
365 days of the year**

**Natural gas demand
in Spain higher than
in 2018**

Leaders in sustainability

We have continued to normally provide an essential service: natural gas supply

THE SPANISH GAS SYSTEM HAS OPERATED COMPLETELY NORMALLY DESPITE THE ADVERSE CONDITIONS

100%

commercial availability

100%

technical availability

**Tanker offloading
service** equivalent to 231.3 TWh

Regasification service

has reached 220.8 TWh

Offloading from **238
methane tankers**

in regasification plants

Utilisation levels from
LNG truck loading

have reached 13.3 TWh

On 31 December, **contracting
storage facilities**
reached **~ 95%**

THE GAS SYSTEM HAS BEEN OPERATED EFFICIENTLY WITH ABSOLUTE FLEXIBILITY

2020 Results

Main highlights 2020

2020 vs 2019



P&L Main highlights

EBITDA

€942.9M

(-5.2%)

Net Profit

€444.0M

(+5.1%)

Results from affiliates
(before PPA)

€174.8M

Cash flow main highlights

Funds from Operations (FFO)

€687.4M

(-8.9%)

Net investment

€859.2M

Balance Sheet

Net Debt

€4,288M

Liquidity

€2,473M

Debt at a fixed rate
higher than

> 80%

No significant

maturities until **2022**

Domestic gas demand (TWh)

Domestic demand

for natural gas at 31
December 2020

360.0

Industrial demand

for natural gas at 31
December 2020

201.4

Demand for electricity

generation at 31
December 2020

88.9

Income statement

NET PROFIT TARGET EXCEEDED IN A VERY DIFFICULT YEAR

€M	2020	2019	% change	
Total revenue	1,084.0	1,151.1	-5.8%	01
Operating expenses	-315.9	-318.3	-0.7%	02
Results from affiliates	174.8	162.1	7.9%	
EBITDA	942.9	994.8	-5.2%	
Amortisation and depreciation	-277.3	-313.7	-11.6%	03
PPA	-51.1	-37.4	36.4%	
EBIT	614.6	643.7	-4.5%	
Financial results	-67.7	-110.8	-38.9%	04
Corporate income tax	-102.0	-109.3	-6.7%	
Minority interests	-0.9	-1.0	-4.6%	
Net profit	444.0	422.6	5.1%	05

01

Negative impact of €70.4 million on regulated income, includes lower RCS due to the COVID-19 crisis

02

Control of operating expenses

03

2019 amortisations include a **Non-recurring effect of -€48.3M in 2019**. Higher PPA associated with Phase I and Phase II acquisitions of Tallgrass

04

The financial result includes a **non-recurring effect of +€18.4M** arising from the purchase of USD and the update of the account receivable from GSP of **+€12.9M**

05

Net Profit target exceeded in a very difficult year

Robust financial structure and high liquidity position

Leverage and liquidity	2020	2019*
Net debt	€4,288M	€3,755M
Net debt/Adjusted EBITDA(**)	4.8x	3.9x
FFO/net debt	16.0%	20.1%
Financial cost of debt	1.9%	2.1%
Liquidity	€2,473M	€2,717M

Liquidity	2020	2019	Current maturity
Treasury	€864M	€1,099M	
Club Deal	€1,500M	€1,500M	December 2025
USD Lines	€109M	€58M	July 2024
Other ST lines	-	€60M	July 2021
TOTAL	€2,473M	€2,717M	

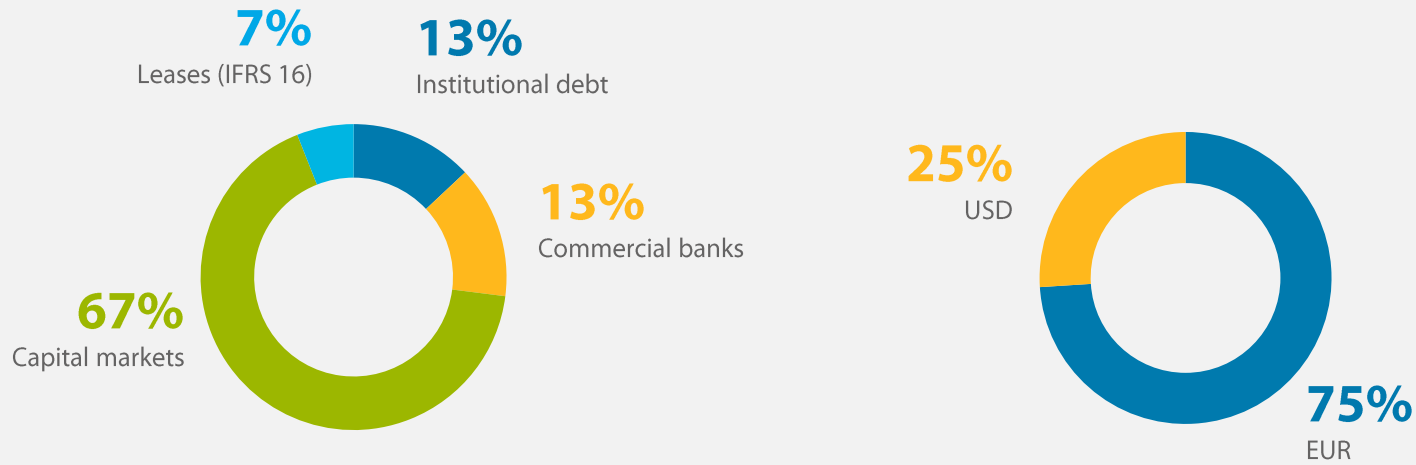
 **High liquidity position**

 **Credit ratings BBB+**

(*) GNL Quintero pro forma data: accounted for using the equity method
 (**) EBITDA adjusted by dividends received from affiliates

Financial structure

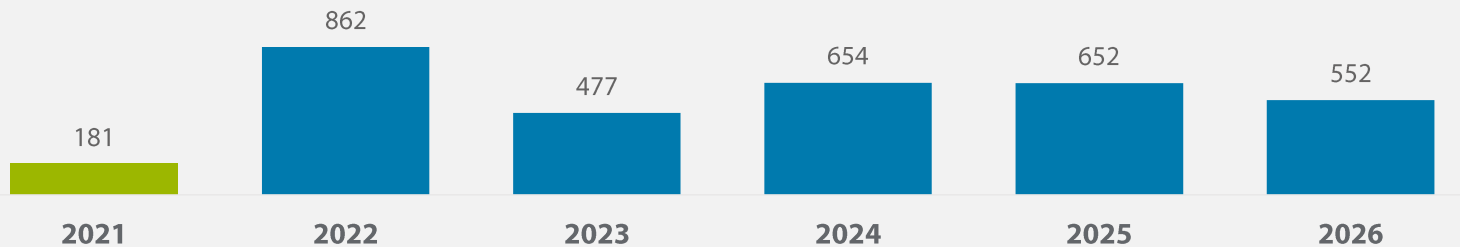
Debt type



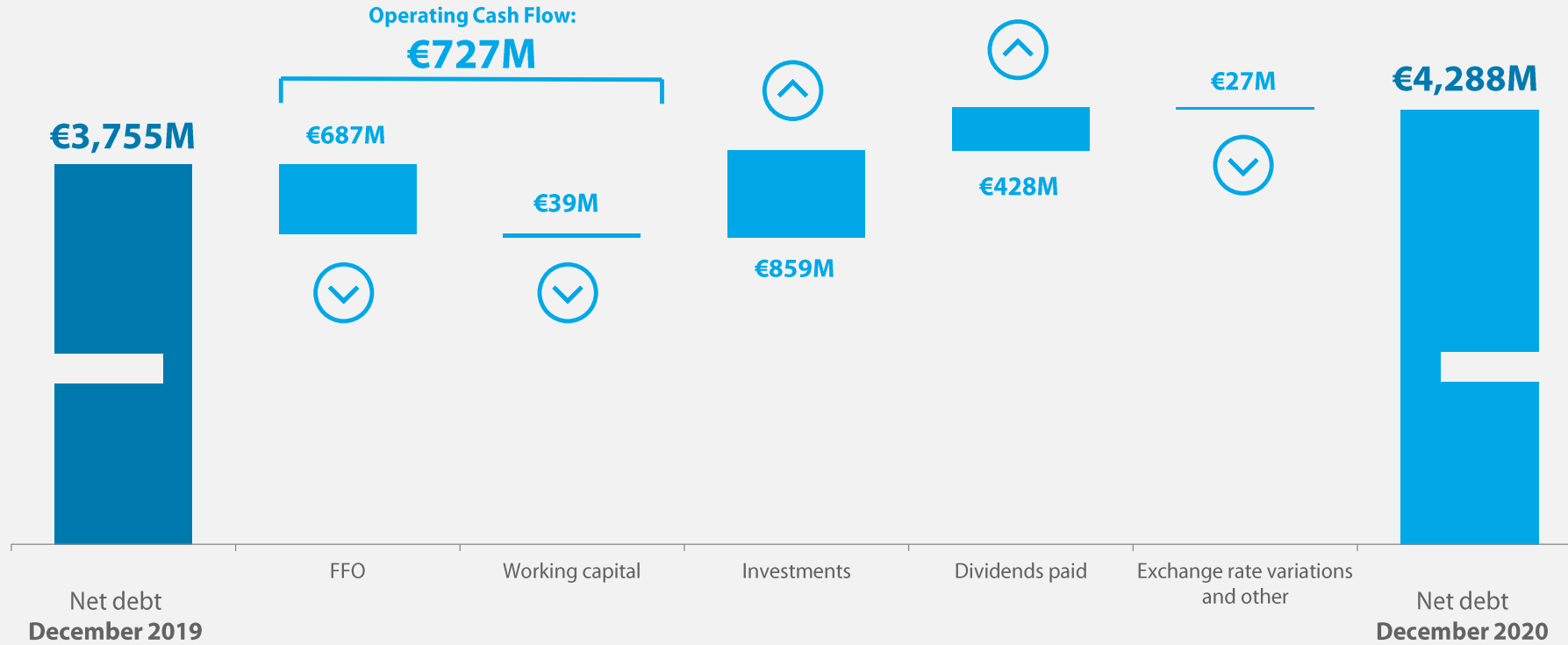
✓ No significant maturities until 2022

✓ Average life of debt 5 years

Debt maturities (€M)



Cash flow and net debt evolution

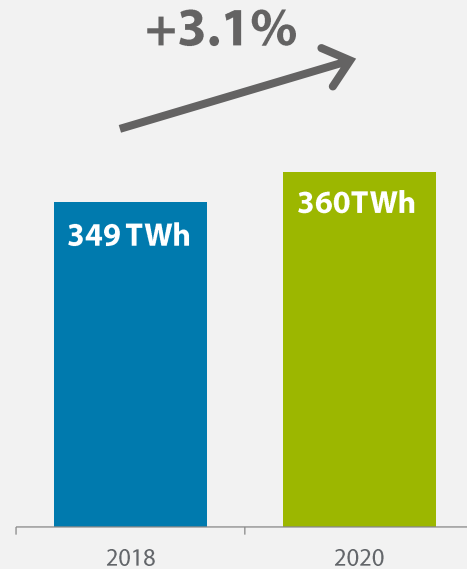


Fixed-rate debt higher than 80%

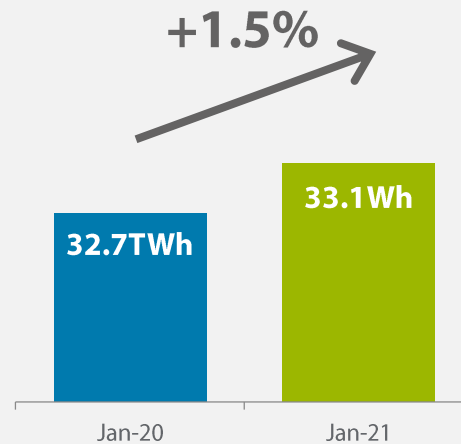
Natural gas demand

NATURAL GAS HAS AN ESSENTIAL ROLE IN THE DECARBONISATION PROCESS AND WILL CONTINUE TO PLAY THAT ROLE FOR AT LEAST THE NEXT 10-15 YEARS

**Demand trend
2020 (TWh)**



**Growth in conventional demand
January 2020 vs January 2021**



Source: Enagás GTS

- Despite the significant impact of COVID-19 and being a relatively warm year, gas demand has been resilient, with **demand more than 5% higher than forecast by the PNIEC** in its target scenario and without being translated into higher emissions.
- Natural gas has an essential role in the decarbonisation process and will continue to play that role for at least the next 10-15 years
- Gas has played an essential role during the most significant cold spell that our country has experienced in recent years:
 - Record **figures in demand** of residential natural gas.
 - Crucial role of gas in power generation to avoid electricity cuts due to lack of renewable sources such as wind or solar.



03

2021-2026 Strategic Update

Main mission: contribute to energy security

Decisive role of natural gas and infrastructure in contributing to the ecological transition

Visibility of the Regulatory Framework until 2026

**1 Consolidation and rotation
of international assets**

**2 Promotion of new projects linked
to the ecological transition**

Strong commitment to dividends

ESG as a cornerstone of the strategy

3.1







Business environment






Closure of the 2021-2026 regulatory framework

REGULATORY FRAMEWORK CLOSED TO 2026 PROVIDES HIGH VISIBILITY IN THE COMPANY'S REGULATED CASH FLOWS IN THE LONG TERM

Principles

 <p>Adapted to the energy transition</p>	<ul style="list-style-type: none"> Incentives to keep the gas system's transmission infrastructure available, to fulfil the role assigned by the PNIEC for natural gas and renewable gases in the energy transition process Use of existing gas infrastructure is essential to move forward with the energy transition at the lowest cost
 <p>Stable and predictable</p>	<ul style="list-style-type: none"> Simple and transparent regulatory framework Predictable WACC methodology, similar to the main European frameworks Gas system generating annual surplus with current tolls Adapted to the maturity of the network: strengthens incentives to extend the useful life of assets
 <p>Stability</p>	<ul style="list-style-type: none"> Regulatory period of 6 years without intermediate reviews
 <p>Independent Regulator</p>	<ul style="list-style-type: none"> The first time that the transmission networks and LNG plants are regulated by an Independent Regulator (CNMC)

Methodology

<p>Linked to System assets</p>	 <p>Return on investment</p>	<ul style="list-style-type: none"> Remuneration linked to net assets during their regulatory lives Change to a stable and predictable WACC methodology 2021-2026 financial remuneration rate: 5.44%
	 <p>RCS (Remuneration for continuity of supply)</p>	<ul style="list-style-type: none"> Remuneration linked to the long-term availability of Gas System assets with adequate maintenance RCS revenues established for 2020 will progressively decrease to 20% at the end of the 2026 regulatory period
	 <p>O&M (Efficiency incentives)</p>	<ul style="list-style-type: none"> Compensation based on Opex standards, with room for efficiency The company could maintain 50% of the efficiencies
	 <p>REVU (Incentives to keep the facilities operational)</p>	<ul style="list-style-type: none"> Once the regulatory useful life ends, the facility receives additional compensation Compensation as a percentage of Opex that is increased based on a long-term progressive formula
	 <p>Investments in the system (Copex)</p>	<ul style="list-style-type: none"> Financial rate: 5.44% and two years of amortisation

Adapting the investment pace to the environment

2021 - 2023

Laying the future foundations for growth and the role of TSOs in the European decarbonisation process

- **Objective to lower leverage** after two years of heavy investment.
- **Investment in Spain:** 380M
- **Rotation of our international assets**, with the objective of maximising the value for our shareholders.
- **Consolidation of investments** carried out, with a focus on: Tallgrass and TAP.
- **GSP arbitration.**

2024 - 2026

Accelerating sustainable investment in which the company is already working

- **Investment in projects associated with decarbonisation**, with a focus on renewable gases, technological innovation and digitisation.
- **International investment in decarbonisation projects** in accordance with the climate objectives of the countries where we operate.

3.2



Outlook for 2021-2026

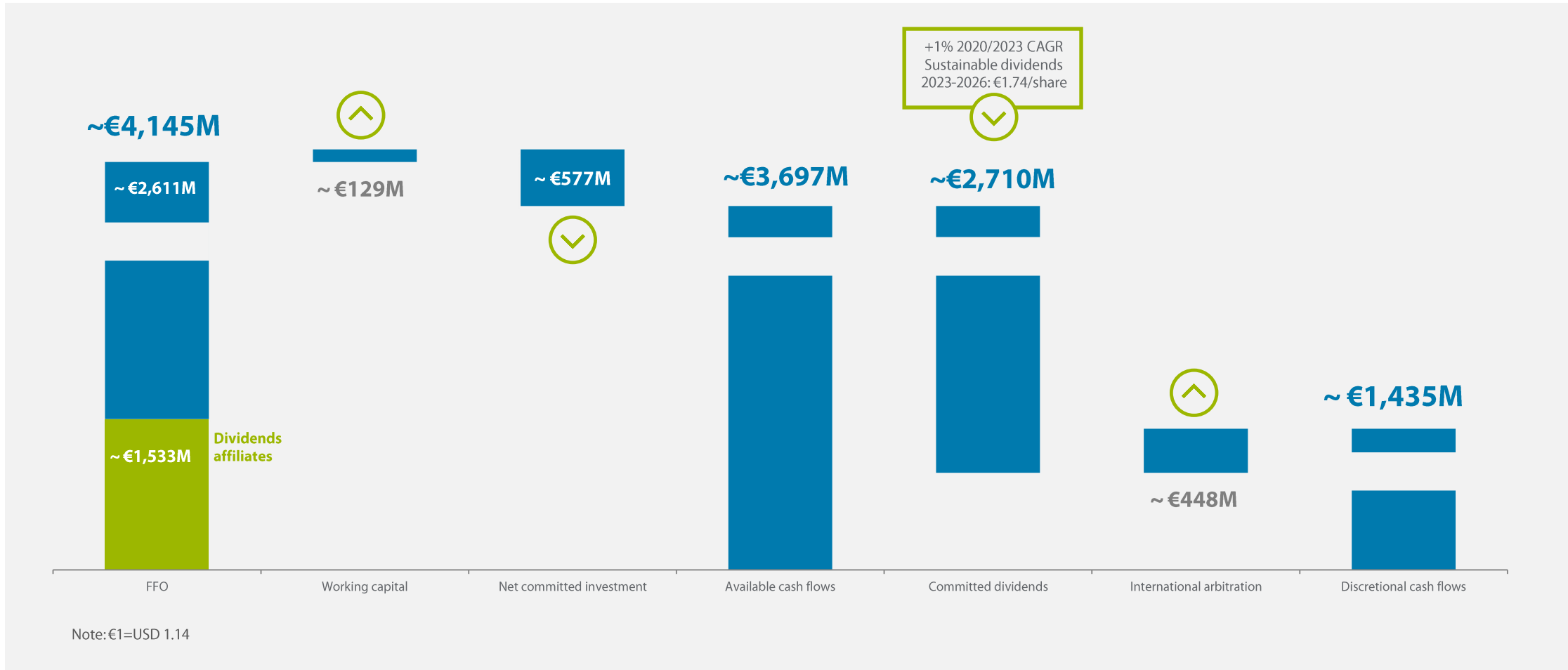
Outlook for 2021 and annual targets

INTENSIFICATION OF THE CONTROL PLAN AND SAVINGS IN EXPENSES, AS WELL AS REDUCTION OF THE COMPANY'S NET DEBT

- **Intensification of the control plan and savings in general** expenses, with elimination of all that is not essential for business continuity and for the maintenance of current and future activity and employment.
- **Solid cash generation that will reduce net debt** and continue to maintain a solid and optimal balance structure.
- **No significant maturities in 2021 and excellent liquidity situation:** €2,473M on 31 December 2020.
- **Estimated Net Profit for the end of the year: ~€380M.**
- **The cash flows generated are sufficient to ensure we can commit to our dividend policy** for 2021 (€ 1.70/share + 1% compared to 2020).



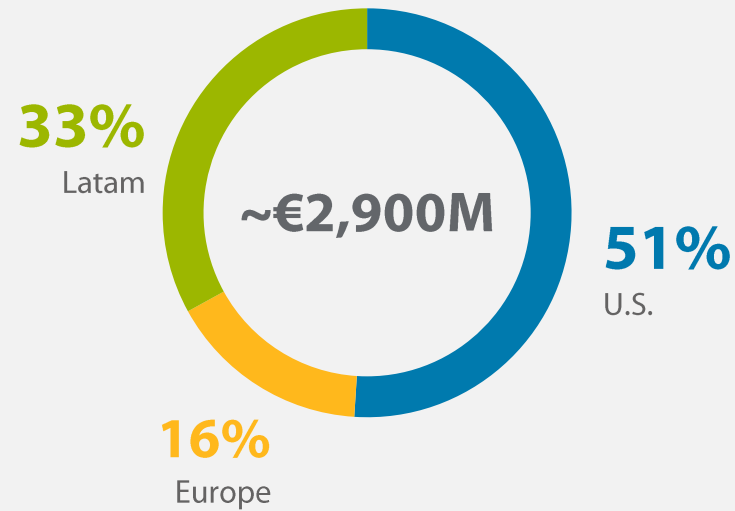
Outlook for 2021E-2026E: solid cash flow generation



DISCRETIONAL CASH FLOWS GENERATED, WITH NO ADDITIONAL INVESTMENTS, WILL BE SUFFICIENT TO ENSURE CONTINUED COMMITMENT TO OUR DIVIDEND POLICY AND SUSTAINABLE FUTURE GROWTH

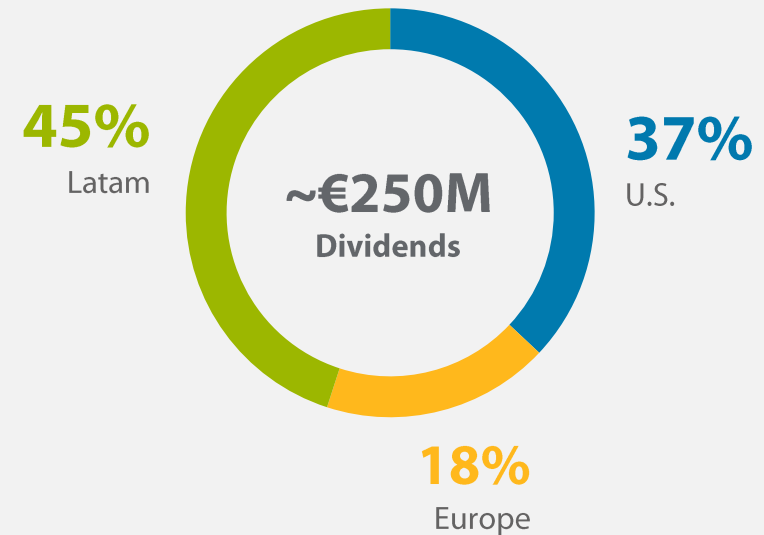
Contribution of affiliates dividends 2021E-2026E

Capital invested in international subsidiaries



(*) The capital invested at 31/12/2020 in international subsidiaries includes the investments made in the Spanish subsidiaries BBG and Saggas. Does not include investment made in GSP

Average 2021E - 2026E



Note: €1=USD 1.14

HIGH VISIBILITY OF THE EXPECTED DIVIDEND OF OUR AFFILIATES BECAUSE THEY ARE ASSETS REGULATED OR PROTECTED BY TAKE OR PAY CONTRACTS

Trans Adriatic Pipeline (TAP)

THE COMMISSIONING IN NOVEMBER CLOSES 4.5 YEARS OF CONSTRUCTION OF A PROJECT OF EXTRAORDINARY COMPLEXITY AND MAGNITUDE, WHICH WILL PROVIDE ENAGÁS WITH A STABLE CASH FLOW AND HIGH PROFITABILITY



- Natural gas now flows in Snam's network in Italy, as well as in the Greek network operated by Desfa.
- **Strategic asset** for the energy supply of the European Union
- **Total investment** for Enagás (16%): **€218M**
- **Average P&L contribution 2021-2026: €50M/year**
- Average contribution **Cash Flow 2023-2026: €44M/year**
- **IRR: > 11%**

TGE Main Highlights in 2020



STRONG RECOVERY OF PRICES AND PRODUCTION IN TGE'S BASINS IN THE SECOND HALF OF 2020

The OPEC price war and the effects of COVID-19 led to an unprecedented crisis in the oil & gas sector in the US: destruction of demand and production and a historical collapse of the commodities' price.

Pony Express (PXP) Main highlights in 2020

High utilization: the volume transported was only affected during May and June. Excepting those two months, utilization has been very high, reaching its monthly historical maximum in August.

Diversified and competitive supply: recovery of production in Bakken, Denver Julesburg (DJ) and Powder River. The start of operations of different laterals in the Colorado area have increased the volumes going into PXP in the DJ basin. In addition, since July, heavy Canadian crude has been transmitted.

Contractual structure: the commercial effort made during the year allows 84% of the total transportation capacity to be secured by take or pay contracts or controlled by shipper history⁽¹⁾

Competing projects: The competing project, Liberty, has been deferred. Other oil pipelines have regulatory problems that could affect to their operation.

Rockies Express (REX) Main highlights in 2020

High utilization: REX has maintained a high utilization in 2020, mainly in the East end, where it was close to maximum historical values during 4Q2020.

New supplies: commissioning of Cheyenne Connector and Cheyenne Hub projects in DJ.

Contractual structure: delay in part of the re-contracting of the West to East available capacity, due to commodities prices' volatility.

- REX East to West: new long-term contracts with clients linked to final demand (distribution and combined cycle).
- REX West to East: new long-term contracts after the entry into commercial operation of the reverse flow in zone 1.

Competing projects: final cancelation of Atlantic Coast Pipeline and delay in Mountain Valley Pipeline due to regulatory issues.

(1): Priority right of the client to use the infrastructure. Provides an incentive to continue using PXP versus other options

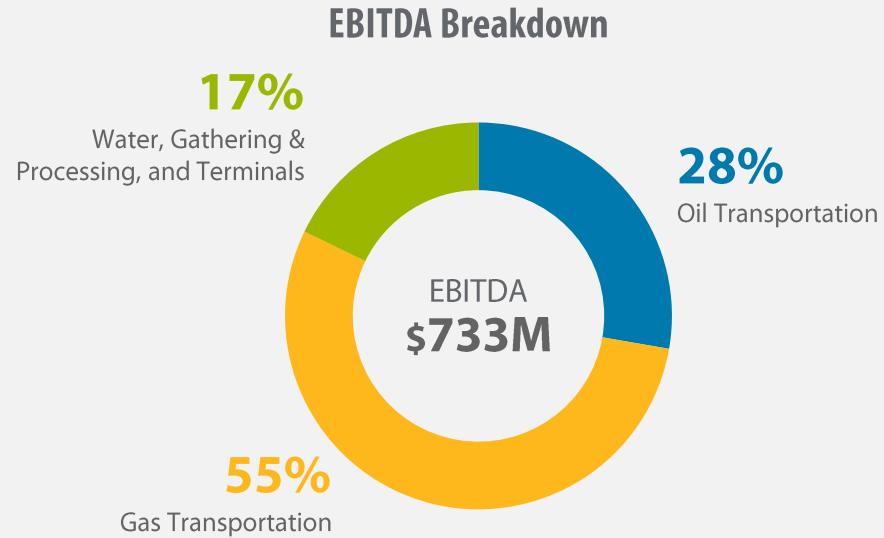
In one of the worst years for the US oil & natural gas sector, TGE's EBITDA has shown great resilience thanks to the quality of the company's **take or pay** contracts

2021-2026 Strategic Update

Tallgrass: 2020 EBITDA breakdown



EBITDA
\$733M
 (-14% vs 2020 budget)



Long-term contracts (take or pay)

	Total capacity	Long-term contracted capacity ⁽¹⁾	Average life take or pay
REX (West to East)	~ 1,800 (Mdth/d)	42%	2024
REX (West to West)	~ 650 (Mdth/d)	68%	2024
REX (East to West)	~ 2,600 (Mdth/d)	100%	2032
Pony Express	~ 450 (Mbps)	84% ^(*)	2024

(1) As of 12/31/2020. It does not include settlement figures for Gulfport's that will release 125Dth of capacity.

(2) Includes MVC (Take or pay) contracts and historical client rights

Note: Additionally, there are short-term contracts in REX (~400Mdth/d in 2020).

2020 TGE Financial structure



100% TGE DEBT + 75% REX DEBT + 100% HOLDCO DEBT

Net debt
\$6.4bn

No significant maturities until **June 2022**

Average life of debt
7.1 years

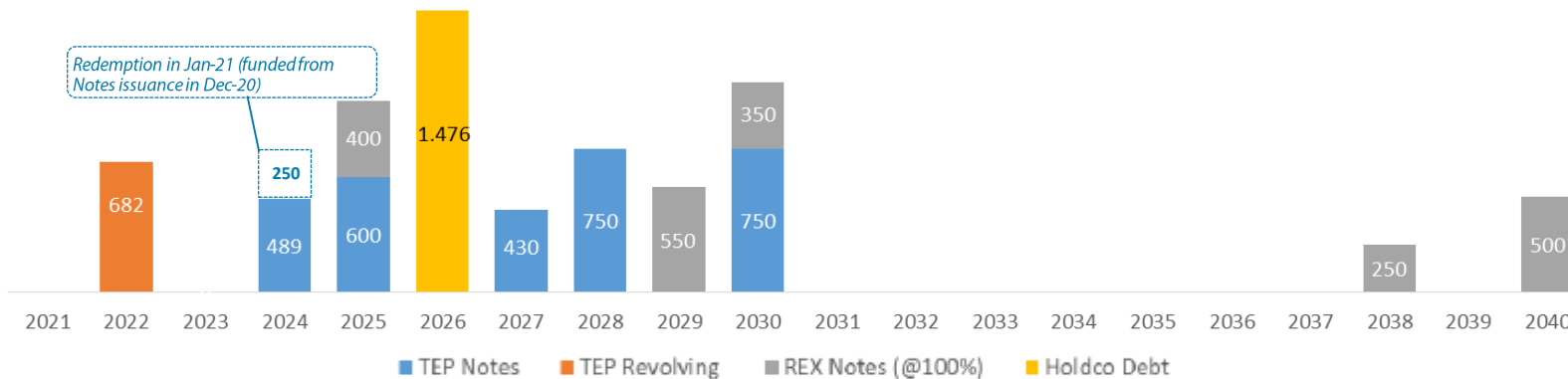
Debt / EBITDA
5.1x/4.8x *proforma* TEP Bank Leverage ⁽¹⁾
7.5x Net Debt / EBITDA ⁽²⁾

Debt Financial cost
5.1%

Capital markets: **71%**
Term Loan B: **20%**
RCF drawn down: **9%**

Fixed-rate gross debt
78%

Maturities (\$M)



(1) TGE debt (TGE Bonds + Revolving TGE) / EBITDA. Proforma calculation assumes partial repayment of the 2024 bond in Jan-21
 (2) TGE Net debt + 75% REX + Holdco / EBITDA

Tallgrass: oil and natural gas demand and production 2021-2026

US will help to meet the oil and natural gas global demand in the long-term. It is a reliable producer with flexible, diversified and competitive supplies compared to other alternatives.



Source: International Energy Agency (IEA), World Energy Outlook 2020 (WEO 2020) October 2020, Stated Policies Scenario.

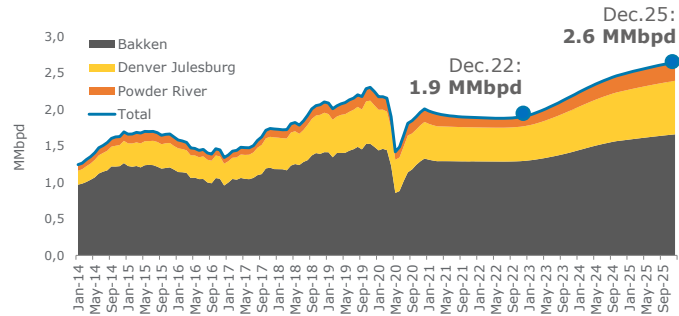
Tallgrass: business outlook 2021-2026



SUSTAINED GROWTH IN OIL AND GAS PRODUCTION IN THE BASINS CONNECTED TO TALLGRASS INFRASTRUCTURE, COMPATIBLE WITH THE EXPECTED EVOLUTION OF THE REX AND PXP BUSINESS

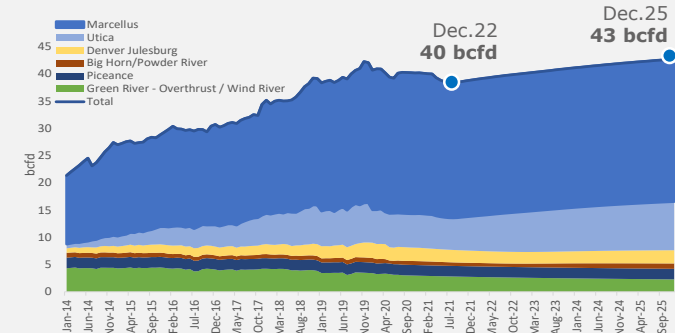
Since July 2020, PXP has begun to transport heavy Canadian crude oil.

Oil production (Tallgrass influence basins)



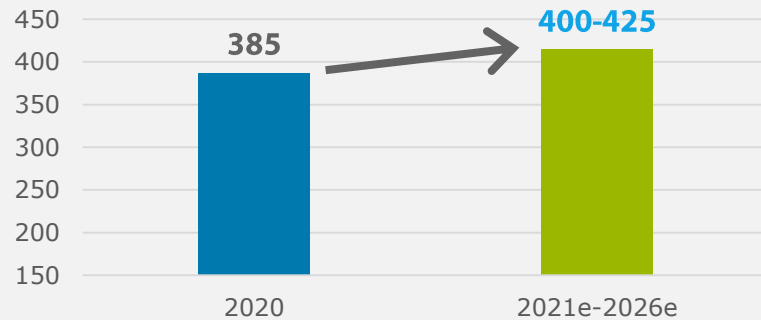
Source: Enverus

Gas production (Tallgrass influence basins)



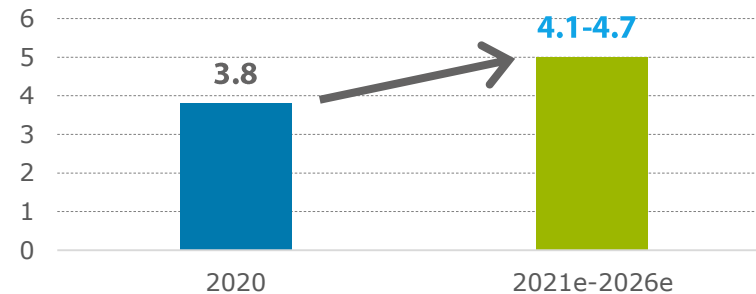
Source: Enverus

Average throughput in PXP (Mbp/d)



Note: Without including the months of May and June, the average volumen transported in 2020 was 409Mbp/d.

Contrated capacity in REX (Bcf/d)



Contrated capacity in REX West to West not included.

WATER, GATHERING&PROCESSING: THE RECOVERY OF EXPLORATION AND PRODUCTION ACTIVITY IN THE NEXT YEARS WILL BOOST THE GROWTH OF EXPECTED WATER SERVICES AND GATHERING AND PROCESSING OF GAS

Tallgrass: 2021, year of transition



TALLGRASS' SHAREHOLDERS HAVE DECIDED TO DISTRIBUTE A DIVIDEND OF \$91M CHARGED TO THE YEAR 2020 AND TO CONTINUE IN 2021 STRENGTHENING THE FINANCIAL STRUCTURE OF THE COMPANY

EBITDA

\$685M-\$735M

(~84% of EBITDA is under Take or Pay contracts)

Funds From Operations (FFO)

\$450M-\$495M

TEP Bank Leverage

4.5x-4.9x



Outlook 2021-2026 TGE



- Growth: EBITDA CAGR 2021-2026 of **6%**.
- Average investments 2021-2026: **\$360M**, with an average EBITDA multiple of **6.4x**.
- The creation of a new sustainability business line (transport of hydrogen, renewables production, etc) allows us to reinforce and diversify the growth of our portfolio.
- Financial policy : Target TEP Bank Leverage **4.5x** and Ratio Look Trough Leverage less than **7x** (average 2021-2026).
- Average dividend coverage ratio 2022-2026: **1.1x**. (average 2022-2026)
- Shareholders´ dividend distribution of **\$360M** on average for the period 2021-2026 (€95M on average for Enagás).

TEP Bank Leverage Ratio: TGE debt (TGE Bonds + Revolving TGE) / EBITDA. Proforma calculation assumes partial repayment of the 2024 bond in Jan-21
Look-Trough Leverage: TGE Net debt + 75% REX + Holdco / EBITDA

Gasoducto Sur Peruano (GSP)



On 2 July 2018, Enagás filed a request for arbitration against the Republic of Peru before the International Centre for Settlement of Investment Disputes (ICSID) regarding its investment in GSP, under the terms of the Agreement for the Promotion and Reciprocal Protection of Investments (APPRI) entered into between the Republic of Peru and the Kingdom of Spain.



According to the procedural calendar approved by the Arbitral Tribunal, the legal advisors consider that the award that ends the arbitration procedure should be issued at the end of 2022.



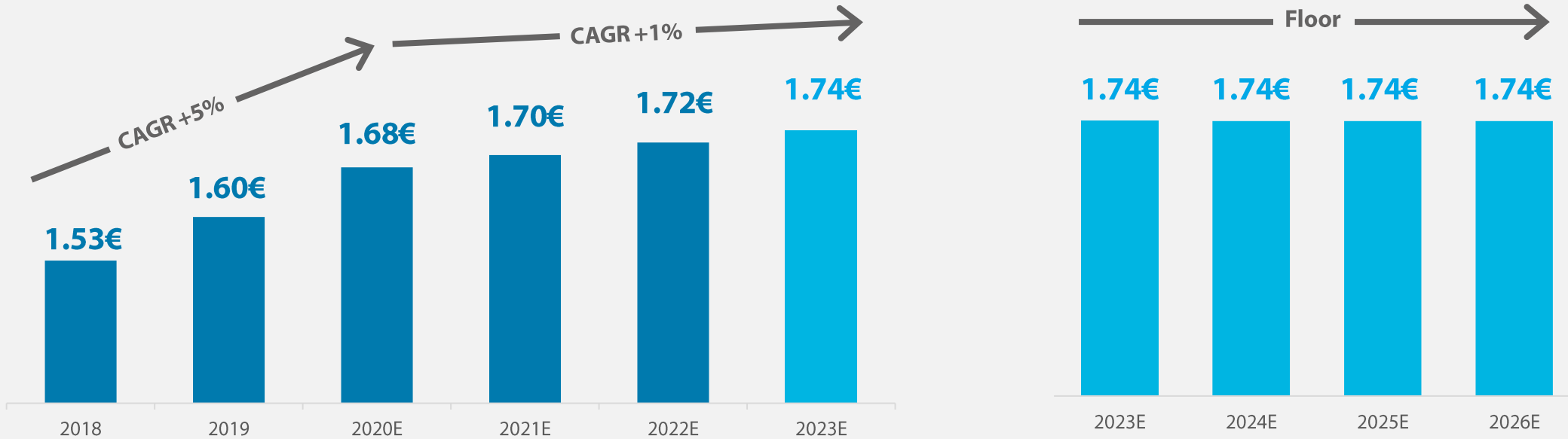
The arbitration procedure is progressing as per the established procedural calendar.




The company is at the disposal of the Peruvian State to reach an amicable agreement to end the arbitration procedure.



Ratifying shareholder remuneration 2021E-2026E



 **Dividend sustainable in the long term**

 **Shareholder remuneration remains our strategic priority**

3.3



Promotion of new projects linked to the ecological transition

Renewable gases: main criteria to promote projects

Enagás' proposal to promote renewable gas projects in Spain consists of promoting projects that meet six main criteria:



30 hydrogen projects

16 biomethane projects

+50 partners

Total mobilization of investments among all partners:
~ €5,000 million

THE NEXT GENERATION EU FUNDS ARE ESSENTIAL FOR MOST PROJECTS TO BE FEASIBLE

Type of green hydrogen projects

- ✓ To replace grey hydrogen with green hydrogen ("industrial clusters")

Example: "E-fuels" project

Partners: Petronor - Repsol, and the Basque Energy Agency

Objective: to develop an industrial scale demo plant for the production of synthetic fuels ("e-fuels"), from green hydrogen and captured CO₂.

- ✓ For the development of green hydrogen corridors (infrastructures, mobility, exportation) and the integration of hydrogen with electrical renewables to improve the manageability of the energy system

Example: La Robla project in León

Partner: Naturgy

Objective: to produce up to approximately 9,000 tonnes of green hydrogen per year, from a 400 MW photovoltaic plant and an electrolyser of up to 60 MW.

- ✓ To replicate the complete green hydrogen chain and all its uses of hydrogen on a small scale

Example: "Green Hysland" project

Partners: Acciona, Cemex and Redexis and has the support of the Industry, Trade and Tourism Ministry, the Ministry for the Ecological Transition and the Demographic Challenge through the Institute for Energy Diversification and Saving (IDAE) and the Balearic Government.

Objective: generate at least 300 tonnes of renewable hydrogen per year, produced from solar energy, with applications for mobility, electricity and heat generation and injection of hydrogen into the gas network.

- ✓ To promote the manufacture of goods and equipment linked to the hydrogen chain in Spain

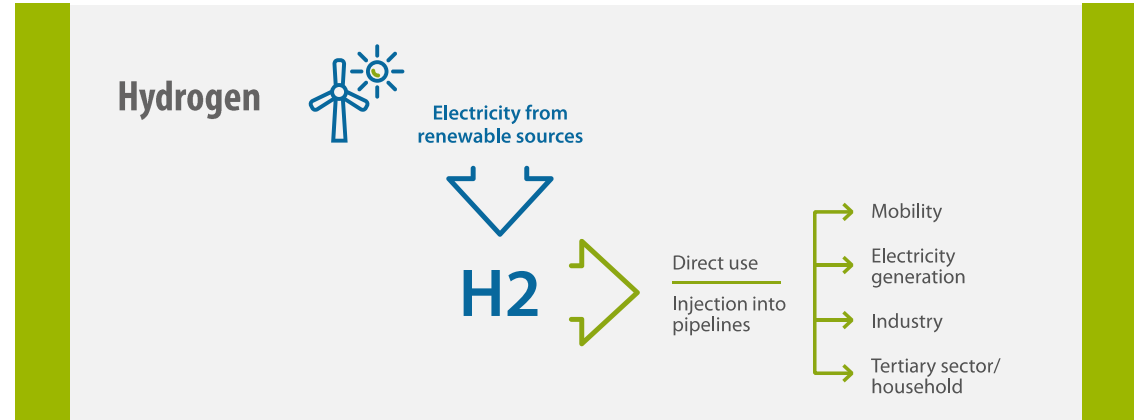
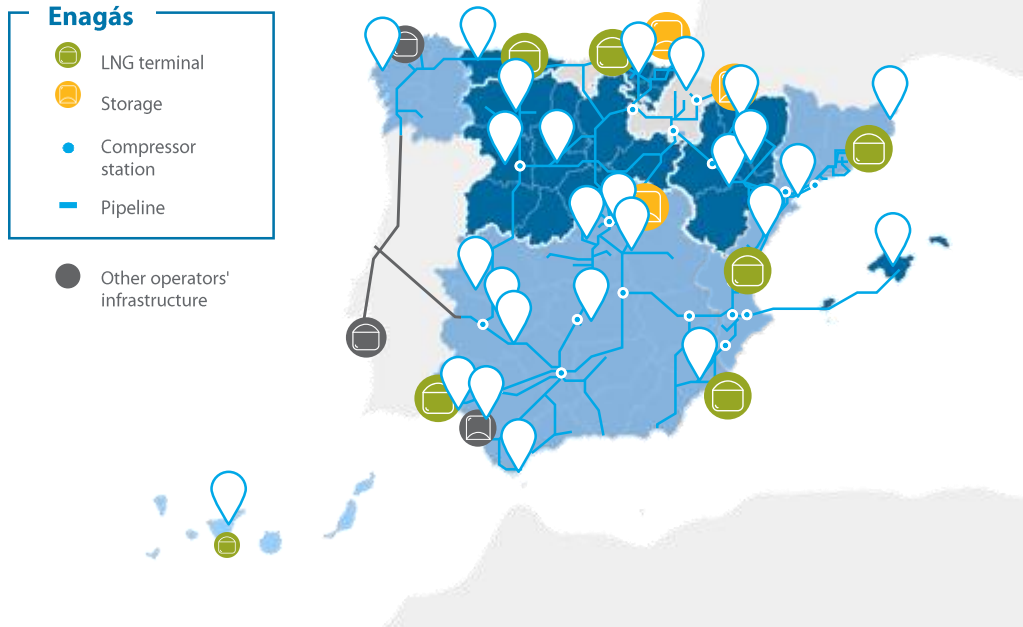
Example: SUN2HY project

Partner: Repsol

Objective: development of a new technology enabling solar energy to be directly transformed into hydrogen by means of a photoelectrocatalysis plant (PEC technology).

Hydrogen: main projects in backlog

> 600 MW electrolysis



More than 30 projects and 50 partners in practically all the Autonomous Communities, covering all the uses and sectors contemplated in the Renewable Hydrogen Roadmap:

- Replacing grey hydrogen with green hydrogen.
- Mobility.
- Thermal uses of difficult electrification.
- Manageability of renewable electrical energy.

Participation in **main associations** (national and European) and direct collaboration with organisations, autonomous communities and municipal councils.

Co-chair of the round table on transmission and distribution of clean hydrogen of the European Clean Hydrogen Alliance.

IPCEI Jun 2020

Recovery Plan Reports

Other projects for decarbonisation

Biomethane projects

More than 15 projects under development in the short term, together with partners, in different autonomous communities (including Madrid, Andalucia, Comunidad Valenciana, Navarra and Asturias).

Participation in **main associations** and direct collaboration with organisations, autonomous communities and municipal councils.

LNG as a decarbonisation vector

Maritime, rail and land transport

-18% of CO₂ emissions with LNG in maritime transport.

Between **2 and 4 million tCO₂** avoided in 2030 (LNGas hive project).

In the rail sector **-20% emissions** through road traffic recovery.

Examples:

Small Scale LNG Plant Project in Ravenna (through Scale Gas)

CORE LNGas Hive Project

Project with Renfe



04

2025-2040 Roadmap

Roadmap linked to the European Hydrogen Strategy, to the Roadmap of the Spanish Government

Relevant role of TSOs in the EU decarbonisation plan

Important role of existing infrastructures in this period

Execution of new projects and infrastructures for decarbonisation

Role of TSOs in the European decarbonisation process

Market accelerators: Key role as a demand generator and market that makes attractive the entry of more participants that use its infrastructure

Experience and technical capacity: These may be facilitators of cost-effective conversion principles and gas quality management services, while ensuring market integrity and diversification of supplies.

Cooperation between TSO and DSO: Essential for a proper distribution: i) Exchange of data on gas quality, especially in cases of bidirectional flows ii) Cross-border coordination at interconnection points, ensuring supply and avoiding market fragmentation.

System integrators: Long-term key role, with an integrated energy market (electricity and gas systems), guaranteeing the development of renewable gas installations under non-discriminatory conditions.

Drivers of regulatory frameworks necessary to carry out the first projects on an industrial scale and develop the entire hydrogen value chain.



Spain, Strategic Energy and Climate Framework

- Draft Climate Change and Energy Transition Law
- National Integrated Energy and Climate Plan (PNIEC) 2021-2030
- Just Transition Strategy
- **Long-Term Decarbonisation Strategy 2050**
- **Hydrogen Roadmap**
- Biogas Roadmap (in prior public consultation)
- Energy Storage Strategy (draft in public consultation)

Decarbonisation strategy in the long-term 2050

-90%

of GHG emissions by 2050 vs. 1990

10%

remaining absorbed by carbon sinks

Hydrogen Roadmap

€8,900M
in investments until 2030

4 GW
of installed power of electrolyzers by 2030

25%
of hydrogen consumption by industry is to be renewable by 2030

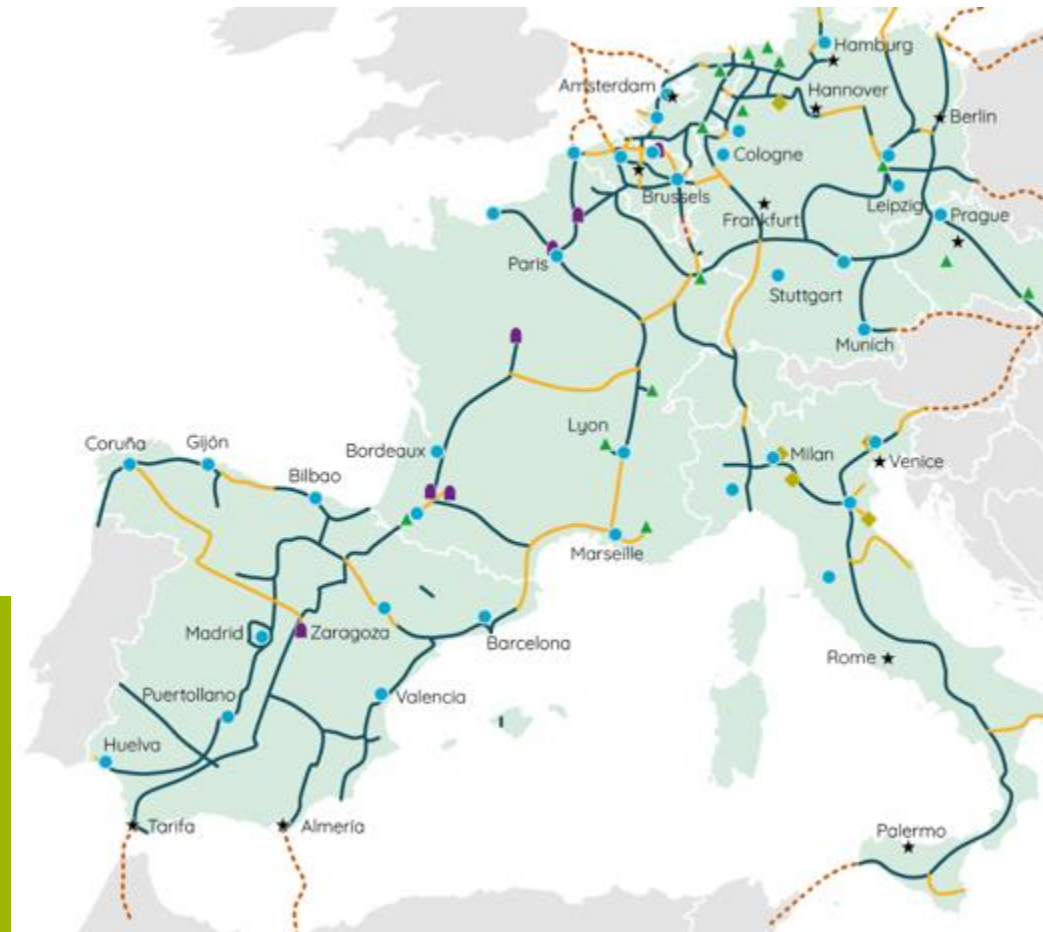
The Spanish gas network, essential long-term infrastructure

- With the help of European recovery plans, **renewable hydrogen could be competitive by the end of the decade**, much earlier than expected a few years ago, in the countries with the greatest renewable resources.
- Due to its high potential for solar and wind generation, **Spain aspires to export renewable hydrogen to the rest of Europe**. It could even become a transit country for green hydrogen from North Africa.
- Enagás, together with the main TSOs, is already working to **prepare the development from 2025 of a backbone network** intended to channel green hydrogen.



Estimated investment for hydrogen development

Proposal for a future hydrogen network by 2040



- The need for hydrogen infrastructure for its transport in **Europe** may lead Enagás to develop **an incremental investment in the range of €4,200M-€6,300M in the period 2025-2040***.
- The future dedicated hydrogen network will greatly leverage the **existing transport infrastructures, complemented by new sections of gas pipeline and storage facilities**, to develop the full potential of green hydrogen production and cover both domestic demand and export demand to the rest of Europe.

* The estimate of the investment required has been made based on internal studies and information shared between European TSOs within the framework of the **European Hydrogen Backbone** initiative, in which Enagás participates, and it will materialise in line with the speed of development of technologies and of the hydrogen market.

<ul style="list-style-type: none"> — H₂ pipelines by conversion of existing natural gas pipelines — Newly constructed H₂ pipelines - - - Possible additional routes ■ Countries within scope of study ■ Countries beyond scope of study ▲ Potential H₂ storage: existing / new salt cavern 	<ul style="list-style-type: none"> ■ Potential H₂ storage: Aquifer ◆ Potential H₂ storage: Depleted field ● Industrial cluster ★ City, for orientation purposes (if not indicated as cluster already)
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**Thank you
very much**

