ADX Energy Ltd (ASX:ADX)

ASX RELEASE

4 May 2021

Vienna Basin Green Hydrogen (H_2) Storage Project Business Case

"A strategic and complimentary business expansion into green energy production and decarbonisation technologies"

Key Points:

- On 21 January 2021 ADX reported a Co-operation Agreement with highly reputed and experienced hydrogen experts Horváth & Partners (Horváth) to evaluate the deployment of reservoirs at the Gaiselberg and Zistersdorf producing fields in the Vienna Basin (ADX Fields) for green hydrogen (H_2) storage.

- The ADX Fields are very suitable for green hydrogen storage due to their close proximity to major renewable electricity sources that can be used for electrolysis to produce green hydrogen, the availability of high-quality reservoirs at suitable depth as well as excellent gas export infrastructure that can be used for the export of green hydrogen.

- ADX and Horváth have progressed the business case for green hydrogen storage in the Vienna basin and are in discussions with renewable energy producers with a view to form a strategic partnership to commence a pilot project.

- The attached presentation summarises the business case for the Vienna Basin Green Hydrogen Storage project and ADX strategic expansion into green energy production and decarbonisation technologies.

ADX Energy Ltd (**ASX Code: ADX**), is pleased to provide the attached presentation outlining the business case for green hydrogen storage in the 100% ADX owned Gaiselberg and Zistersdorf producing fields in the Vienna Basin, Austria (ADX Fields). ADX and Horváth are undertaking a pre-feasibility assessment for green hydrogen storage at the ADX Fields and have commenced discussions with strategic partners for renewable energy production who are ideally positioned in close proximity to the ADX Fields. ADX is seeking to commence a pilot project utilising a 1 MW electrolyser to produce, store and on-sell green hydrogen in the local gas network.

The green hydrogen storage project initiative is consistent with ADX ambitions to position our business for a zero-carbon economy in the future while producing sustainable, low emissions oil and gas in the near term. ADX is very fortunate to have the essential building blocks within our European asset base and the relevant skills amongst our team to expand our business in a number of areas including green energy production and carbon abatement technologies. In addition to the expansion of our assets and the skills of our people, we are developing some key partnerships to progress our sustainability ambitions.

ADX Energy Ltd | ABN 50 009 058 646 -Registered and Principal Office Australia
Suite 214, 210 Bagot Road, Subiaco WA 6008
Telephone: 08 9381 4266 | Facsimile: 08 9381 4766 | admin@adxenergy.com.au | adxenergy.com.au

ADX Energy Ltd (ASX:ADX)

ASX RELEASE

Key points covered in the attached presentation include:

- ADX vision and business expansion strategy
- Green hydrogen storage fundamentals
- Need for green energy storage in Austria
- Development schedule
- ADX Fields storage capacity
- Hydrogen generation and storage trends
- Competitive analysis
- Next steps

ADX Executive Chairman, Mr Ian Tchacos, said, *The Board of ADX is very encouraged by the opportunity to expand our Business into green energy production, green energy storage and carbon abatement technologies by repurposing our production and exploration assets. We are very fortunate to be a producer of safe, sustainable energy to the highest environmental standards as well as being very well positioned for a number of highly compatible, low carbon technologies including green hydrogen production and storage. We look forward to reporting our progress with the Vienna Basin Green Hydrogen Storage Project and other green energy opportunities.*

For further details please contact:

Paul Fink
Chief Executive Officer
+61 (08) 9381 4266
paul.fink@adx-energy.com

Ian Tchacos
Executive Chairman
+61 (08) 9381 4266
ian.tchacos@adxenergy.com.au

Authorised for lodgement by Ian Tchacos, Executive Chairman

Persons compiling information about Hydrocarbons. Pursuant to the requirements of the ASX Listing Rule 5, the unaudited prospective resource information contained in this release has been prepared under the supervision of Mr Paul Fink. Mr Fink is Technical Director of ADX Energy Ltd, is a qualified geophysicist with 23 years of technical, commercial and management experience in exploration for, appraisal and development of oil and gas resources. Mr. Fink has consented to the inclusion of this information in the form and context in which it appears. Mr. Fink is a member of the EAGE (European Association of Geoscientists & Engineers) and FIDIC (Federation of Consulting Engineers).

Profitable Future with Green Hydrogen Storage

Strategic Business Case for H_2 Storage Pilot Project in the Vienna Basin, Austria

Investor Presentation

ADX Energy Ltd, 4th May 2021

Who we are

ADX Energy Ltd (ADX) is an ASX listed Oil & Gas Company

ADX is a rapidly growing European producer and explorer focusing on projects in Austria, Romania and Italy.

We are also working on intelligent solutions to become a leading European energy producer and provider of solutions for a low carbon society to enhance value for shareholders and the communities in which we operate.

We produce safe, low methane gas emission energy now to the highest environmental standards while redeploying our assets, people and skills for transition to low carbon energy production and carbon abatement.

We are well positioned to expand and transform our business for exceptional growth.

Where we are going

Strategic Focus: To become a leading European focussed energy producer and the provider of energy solutions for a low carbon society

ADX Values

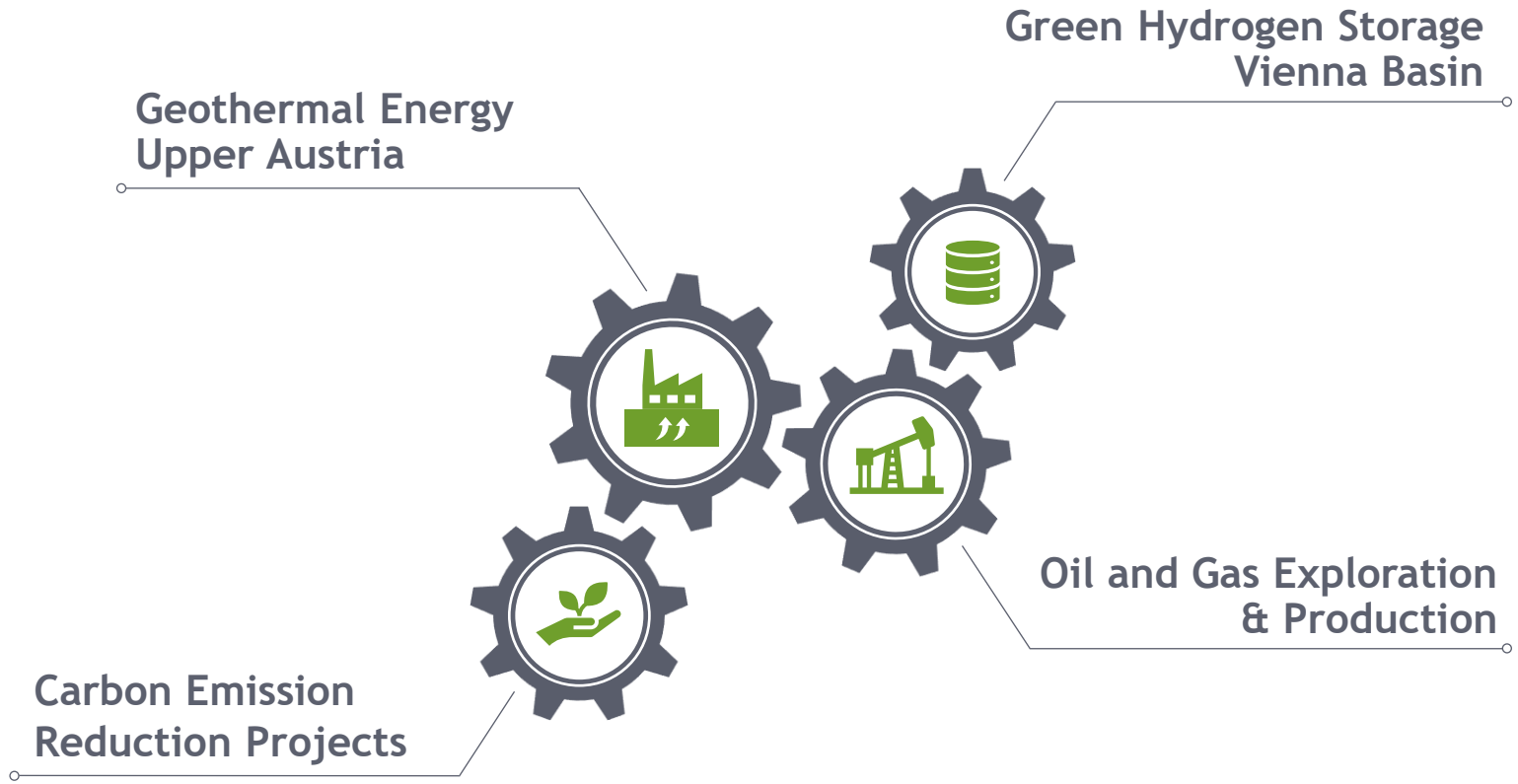
- ✓ Fairness, integrity, honesty and transparency
- ✓ Create respectful, safe and rewarding workplaces
- ✓ Strive for excellence, innovation and teamwork
- ✓ Enrich the communities in which we work
- ✓ Meet and exceed required standards of safety, environmental protection and social engagement

How to expand our business

Utilising our existing assets and skills to transform our business into zero carbon energy production and emission reduction technology business

- Redeploying subsurface reservoirs for safe, cost effective energy storage or green energy production
- Utilising our operational geological, engineering and commercial skills
- Creating innovative partnerships to develop zero carbon ecosystems
- Leverage existing relationships with regulating authorities
- Source ESG investment

The compatibility between oil and gas operations, green energy production and emerging decarbonisation technologies enables us to make a strategic shift without diminishing our existing business.



What we plan to do

A lighthouse project in the European energy market

1. Developing with partners the hydrogen (H_2) storage opportunities in depleted ADX gas reservoirs in the Vienna basin.
2. Offering substantial storage capacity for renewable energy, essential for the decarbonisation of our society.
3. Working with proven technologies that ensure environmentally safe operations, which is a key success factor.
4. Through its unique asset position in Austria, which ADX operates with a favourable production concession in the Vienna basin including land ownership.
5. Legislative changes and potential subsidies from the EU green deal for hydrogen projects make it the ideal time to start.

What we have

Overview on the Vienna Basin Green Hydrogen Storage

Great Fundamentals

- Utilize oversupply of renewable energy in summer to generate green H_2
- Store H_2 in depleted ADX Energy reservoirs in the Vienna basin
- Sell H_2 in winter at premium pricing when there is insufficient energy supply

Perfect Success Factors

- Multiple sources of wind power generation proximal to ADX Vienna basin fields
- Ability to economically store H_2 in significant industrial scale quantities in ADX reservoirs
- H_2 can be directly delivered into existing methane pipeline system

Austrian & EU Policy Support

- Austrian policy to increase current renewable energy output by factor 6 by 2030
- Increasing funding available on favourable terms for renewable projects
- EU subsidies for hydrogen projects

Our green hydrogen vision

To build a substantial, profitable & green H_2 ecosystem for the energy sector

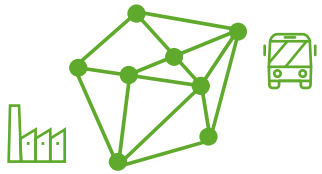
Today, 2021
Initiation

- Initiation of pilot project
- Strategic partnerships with energy producers and gas grids
- Securing funding and subsidies

2023-24
Pilot project in operation

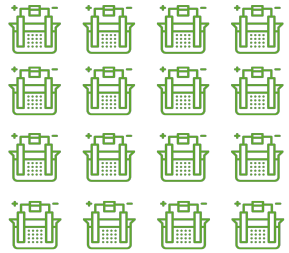
- Safe Hydrogen storage in pilot reservoir in Vienna basin operations
- Energy from renewable sources

2025-26
Small ecosystem



- Integration of new partners, forward integration of ecosystem
- Additional capacity for electrolysis and storage

2030
Full ecosystem developed



100 MW

- Comprehensive scaling of ecosystem, also in Upper Austria
- Connection to future Hydrogen backbone in Austria

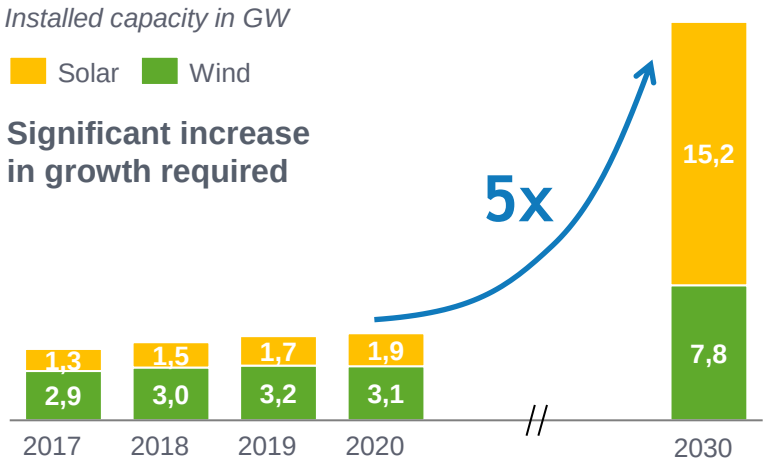
Renewable energy production, 1 MW electrolyser and storage

Need for renewable energy storage

Matching the peaks of renewable production with energy demand in Austria

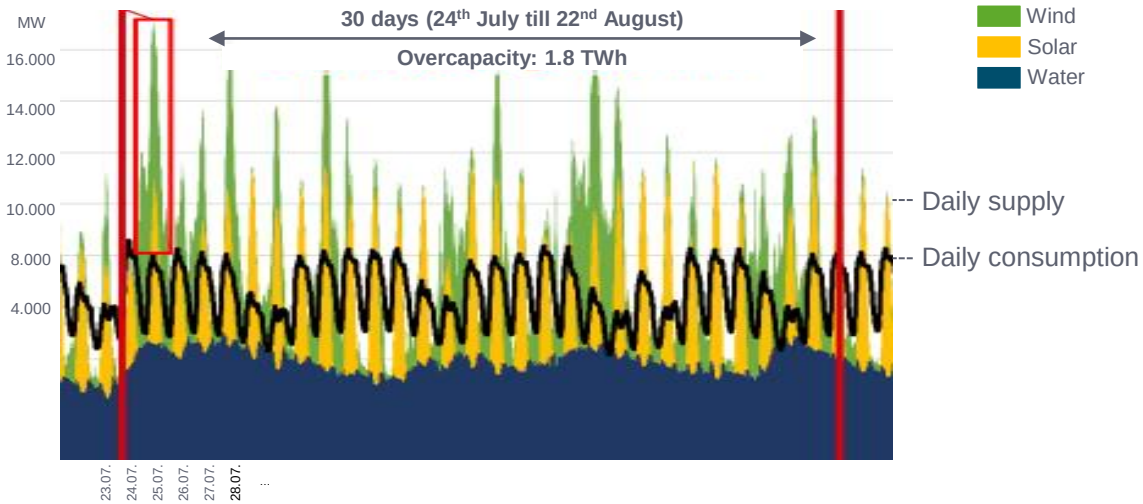
Renewable energy production Austria

excluding water, biomass
increase based on targets according to Erneuerbaren-Ausbau-Gesetz (EAG)



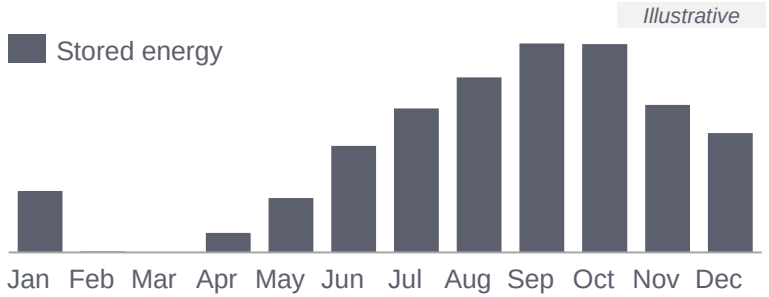
Source: Horváth & Partners

Load in summer 2030



Source: APG

Seasonal storage required



- Substantial capacity to store renewable energy required to reach climate goals as defined in law (EAG).
- Seasonal storage is necessary in order to balance energy production and demand between seasons.
- 1.8 TWh is equal to 3 times the capacity of Austria's largest hydro pump storage station or the yearly need for half a million Australian households.

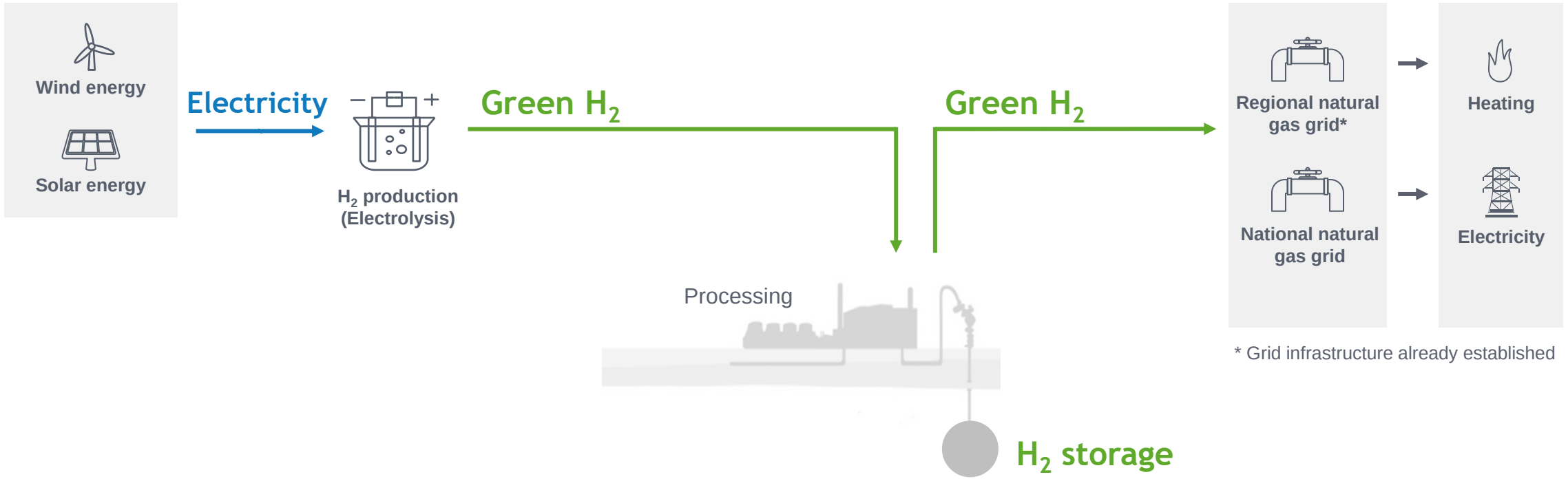
*Total storage capacity: 588,3 GWh

H_2 ecosystem development overview

Phase 1 - Pilot Project - ADX position in the H_2 value chain

2021

Energy Production	H_2 Production	Processing	Storage	Transport and Use
Partner	Partner or ADX ENERGY	ADX ENERGY	ADX ENERGY	Partner



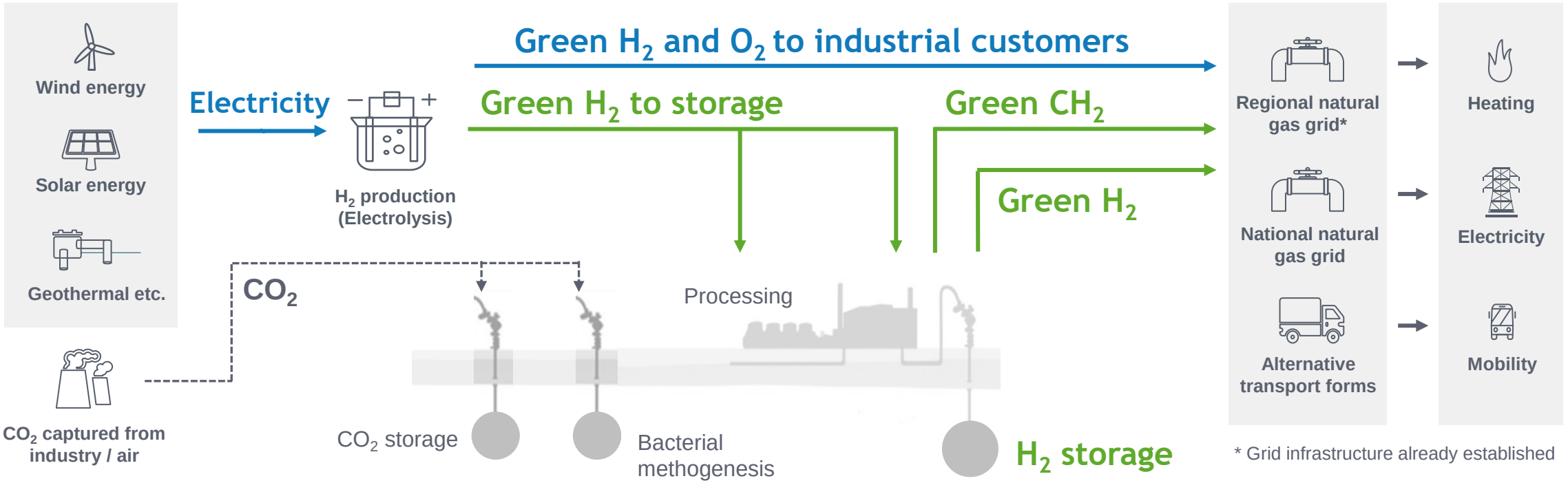
* Grid infrastructure already established

H_2 ecosystem development overview

Phase 2 - Full development project potential

2030

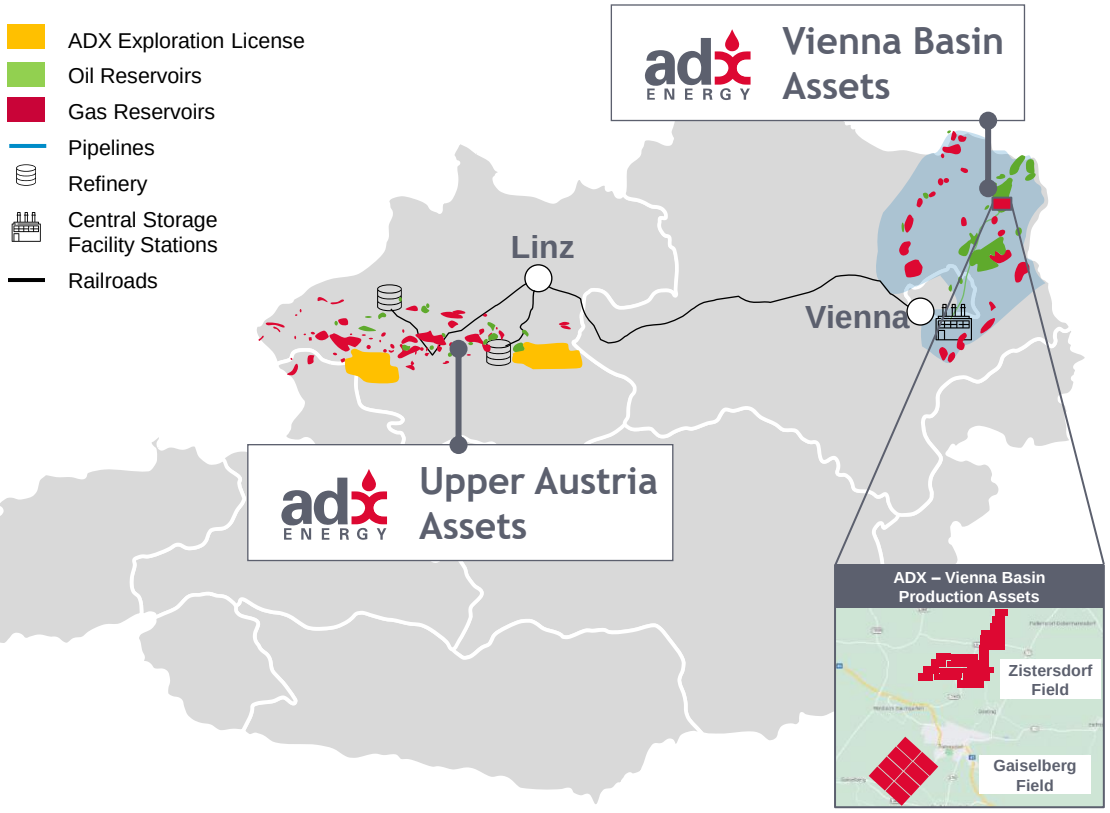
Energy Production	H_2 Production	Processing	Storage	Transport and Use
Partner	Partner or ADX ENERGY	ADX ENERGY	ADX ENERGY	Partner



* Grid infrastructure already established

ADX underground assets

Several Reservoirs with half a million m³ storage capacity in Lower and Upper Austria



Asset Position

ADX owns licenses (exploration, production and storage) for ~50 reservoirs in the Vienna Basin (Zistersdorf and Gaiselberg fields) and further reservoirs in Upper Austria

H_2 and CO_2 storage potential

10 - 20 reservoirs

in the Vienna Basin

Assets managed and operated by ADX local team

100% equity

- in appraisal, exploration, gas storage and geothermal acreage in Upper Austria
- in oil production assets in Vienna Basin

ADX has acquired the Vienna Basin oil & gas production from RAG in 2019 and since then successfully invested in the fields to increase production.

ADX also has operational experience in Tunisia, Italy and Romania and undertook all activities in a safe manner with no LTI's or major incidents.

In 2021, ADX got two further exploration licenses by the Austrian Government in Upper Austria, which are fully covered with modern 3D seismic acquired by RAG.

How big is the ADX Underground Storage?

Illustrative Comparisons

Area

The **subsurface** hydrogen storage reservoir (“sponge”) is approx. 20 hectares in area and 10 meter thick, i.e. the size of 30 soccer fields or a bit larger than the London Serpentine Lake, Hyde Park.

On the **surface** only a few well pad areas as in the picture below are required. That means that only a few hundred square meters are needed.

Energy

ADX can store in one large hydrogen underground reservoir approx. **500 times** the energy – equivalent of the largest Tesla energy storage Mega-Pack (approximately 200 MWh).

Alternatively, our underground hydrogen storage solution could supply 20,000 households with electric energy equivalent for an entire year.

Costs

It costs Tesla approx. € 150 MM to build their “giant” 200 MWh battery storage. ADX can build the subsurface energy storage facility for a tenth of the Tesla battery cost and **2.500 times cheaper**.

As the price of electrolysis comes down, this will be a much more cost efficient way to store energy, with a lot less valuable land required for the facility.

London, Hyde Park Serpentine Lake area = area of 2 underground reservoir (sponge)

Tesla Battery Storage, Australia, needs 10,000 m² of land

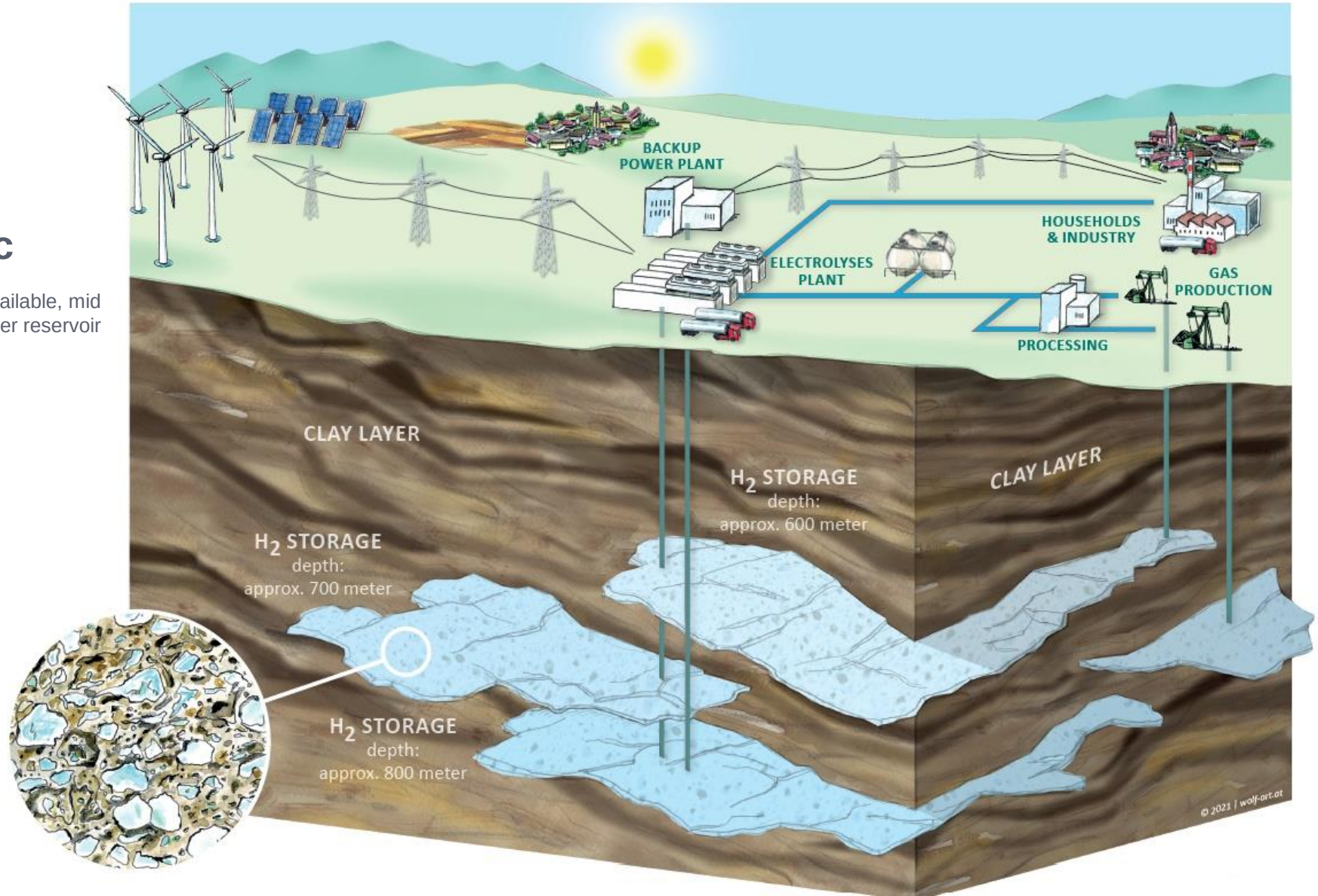
ADX well site area, needs 100 m² of land

Depth panorama ADX gas fields

Bright energy future with underground storage reservoirs

3D seismic

*Several reservoirs available, mid range figures shown per reservoir



Underground storage reservoirs

Large capacities well positioned to infrastructure and energy markets

Reservoirs tested by many wells, historic gas storage operation and 3D seismic – **safe hydrogen storage opportunity.**

Parameter*	Unit
Reservoir depth	660 meters
Geometric volume	0,5 MM m^3
Hydrogen storage volume	25 MM m^3
Hydrogen energy storage capacity	**75 GWh (max)**
Reservoir pressure	Around 60 bar
H_2 max. flow rate	30 MWh/ h
H_2 max. flow rate	0,2 MM m^3/d
Electrolyser max. power	50 MW

Storage capacity can be increased by a factor of 1:10.

The ADX hydrogen storage reservoirs are “porous media” reservoirs.

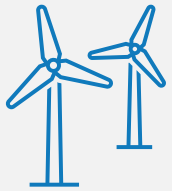
Porous media reservoirs are the safest possible form of underground storage.

Hydrogen will be contained in small pores between sedimentary rocks. The same rocks have contained natural gas for several million years without any leakage. There is no better proof of safe storage than this amazing achievement of nature itself!

Hydrogen storage capacity & costs

Cost effective storage potential for H_2 that can be further expanded easily

Power from 8 wind turbines (24 MW)

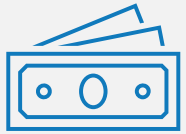


is needed for 1 year to fill up the pilot reservoir with Hydrogen

Pilot reservoir - energy storage capacity approx. 75 GWh

Potential for 10 additional reservoirs in the fields with 500 - 1,000 GWh capacity

Energy storage cost comparison



Battery: 30 - 40 EUR / MWh

Pump storage: 35 - 105 EUR / MWh

ADX reservoir: 30 EUR / MWh*

The pilot reservoir alone has approx.
15% of the storage capacity of the Maltakraftwerke[2]

Austria's largest hydro pump storage

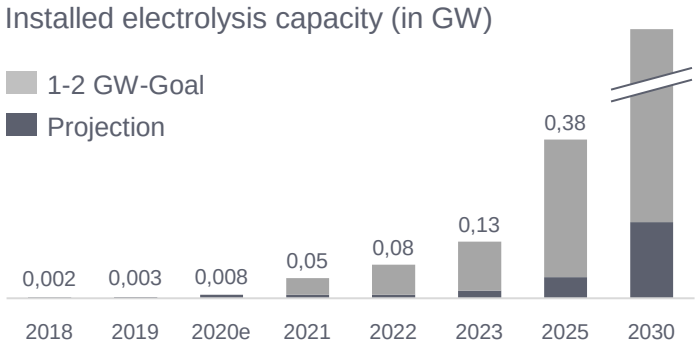
20,000 households
can be supplied with
electricity for 1 year[1]

* Target costs including electrolysis which is expected to significantly drop in cost
1 | Assumption: Electricity and heat consumption of 14.000 kWh
2 | Total storage capacity: 588,3 GWh

Hydrogen trends

Compelling circumstances for H_2 storage project development

Increasing electrolyser capacity inline with ADX phase 1 requirements

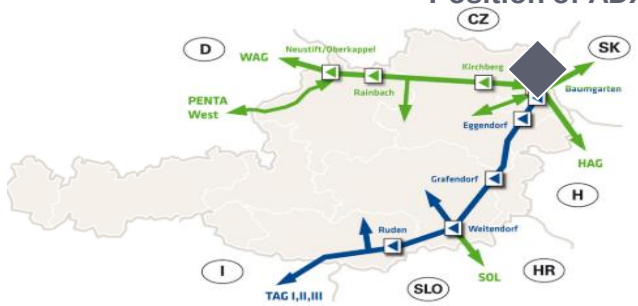


GAP – goal within the AUT H_2 strategy vs. projection given growth

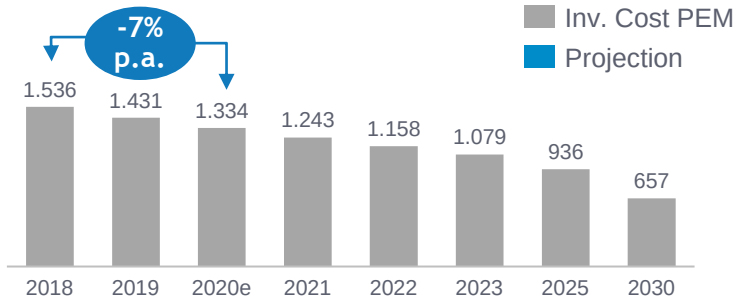
Hydrogen blending in the natural gas grid up to 10% with proximity to potential future H_2 grid

& H2

Position of ADX



Decreasing PEM electrolysers cost trend



Cost development of PEM electrolysers 2018 - 2030 (in EUR/kWe)

PEM costs: -7% p.a.

PEM: Polymer electrolyte membrane

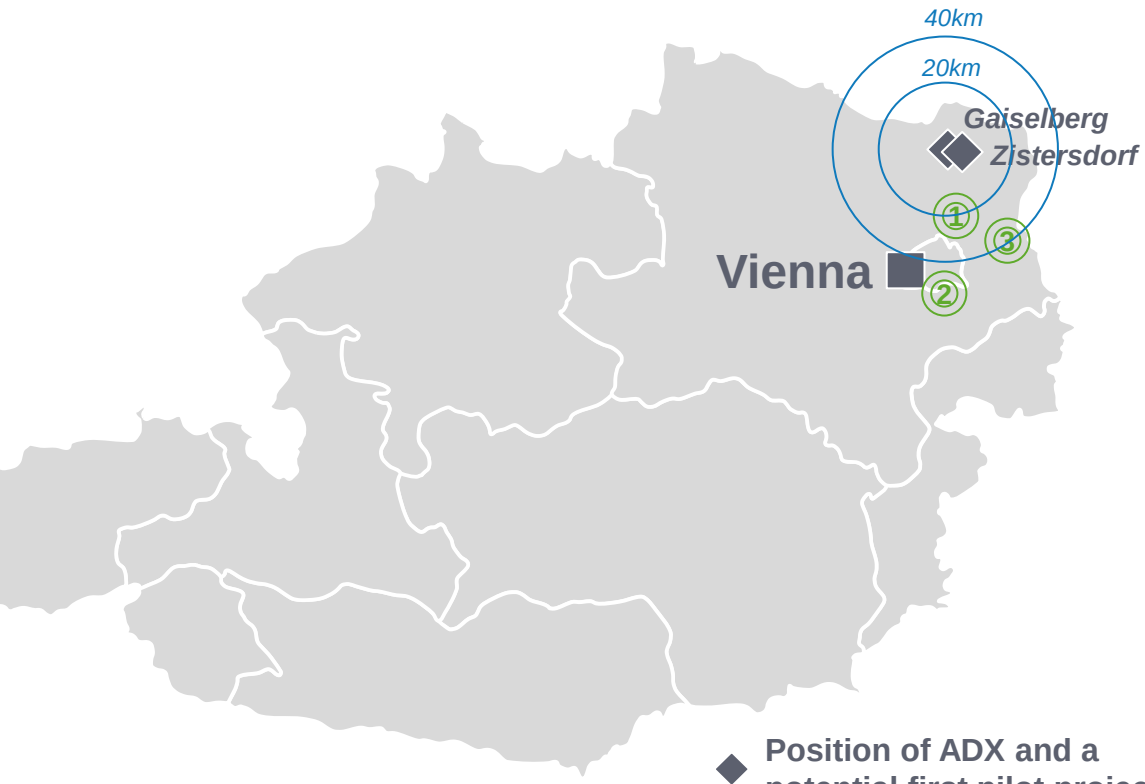
Large subsidy programs have been implemented to boost the Hydrogen economy

- EU Innovation Fund
- Important Project of Common European Interest
- Horizon Europe
- Austrian “Klima und Energiefonds“

Hydrogen ecosystem development in Austria

Potential for innovative partnership opportunities for ADX H_2 storage

Announced Hydrogen projects in Austria



◆ Position of ADX and a potential first pilot project

H_2 Hubs and examples of Hydrogen pilot projects

1. **Wind2Hydrogen pilot** facility in Auersthal converted power from wind turbines into transportable, storable Hydrogen
2. **H_2 Pilot** in Schwechat - Electrolysis capacity 10 MW - Initial operation is planned for 2023
3. Baumgarten will be part of the **IPCEI project "Green Hydrogen @ Blue Danube"** and will become a European hub for H_2 transport

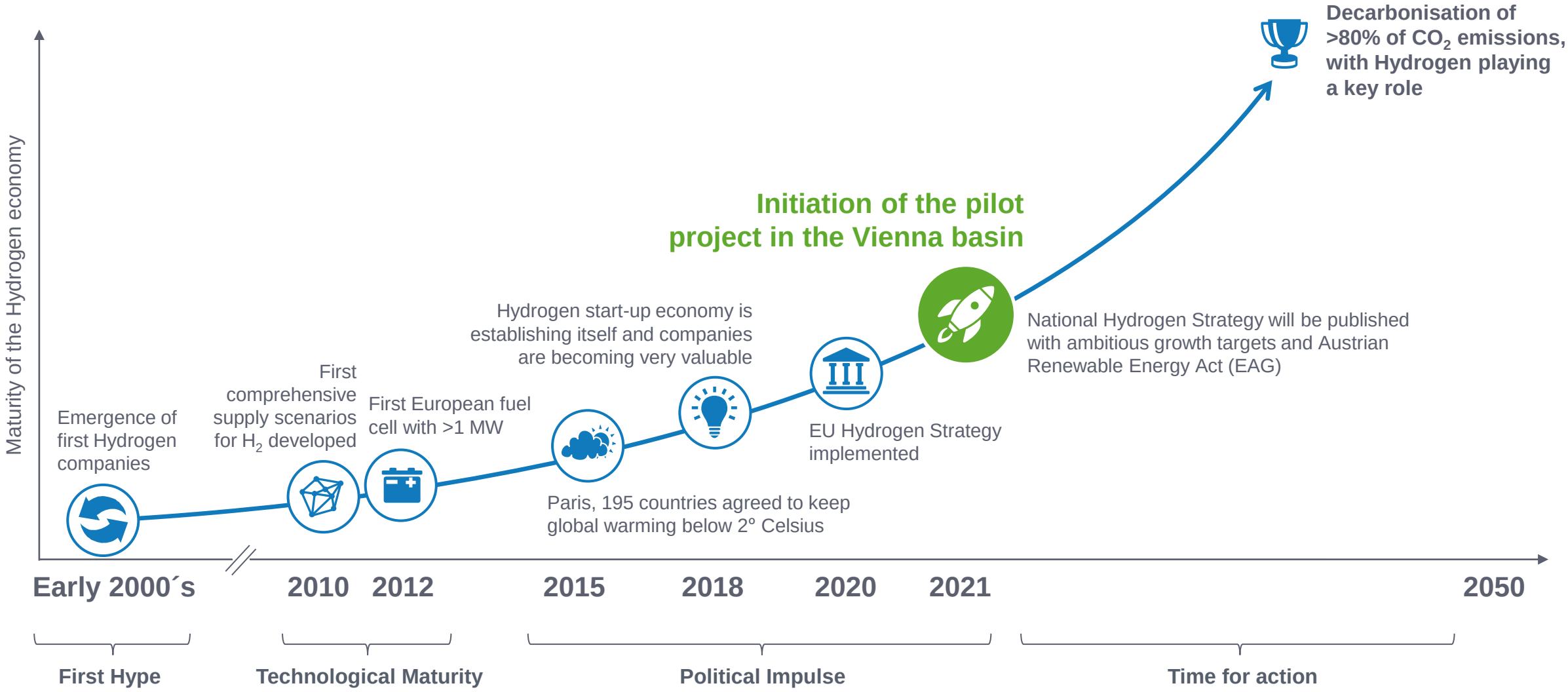
Further potential partners in the surrounding region for an ecosystem approach

BOREALIS Keep Discovering · amazon · Air Liquide · Linde · VOR · ÖBB · nahwärme dürnkrut GmbH · OMV

...

Hydrogen economy growth in Europe

Perfect timing for ADX to take off



Benefits for participants

To be a partner in a sustainable energy project

Being part of the Hydrogen megatrend

gaining knowledge, increasing attractivity for stakeholders and improving reputation of the company

Optimize value from seasonal energy trends

overcoming the seasonality of the renewable energy production and selling zero carbon energy at peak value

Use momentum in subsidies

utilise subsidies to boost initial investments with capital from funds based on the EU green deal*

** 750 bn EUR total subsidies for Green Deal in EU*

Unique Opportunity provided by ADX assets

including capabilities and expertise regarding Hydrogen technology and operations (incl. safety) as well as infrastructure and land rights

Community Benefits

Sustainable future for the local community

A more sustainable future

Community recognition for sustainability and innovation through participation in green projects.

Employment in low carbon industries

Safeguarding well paid jobs in the region in a net zero society, creating sustainable mobility options and funding opportunities for the community.

Safe operations, sustainable income

Using existing production assets and proven technologies, to ensure safety and minimise environmental risks.

Hydrogen leader status to attract hub development

Building expertise in the Hydrogen storage business will attract other regions and related businesses.

Next Steps for ADX

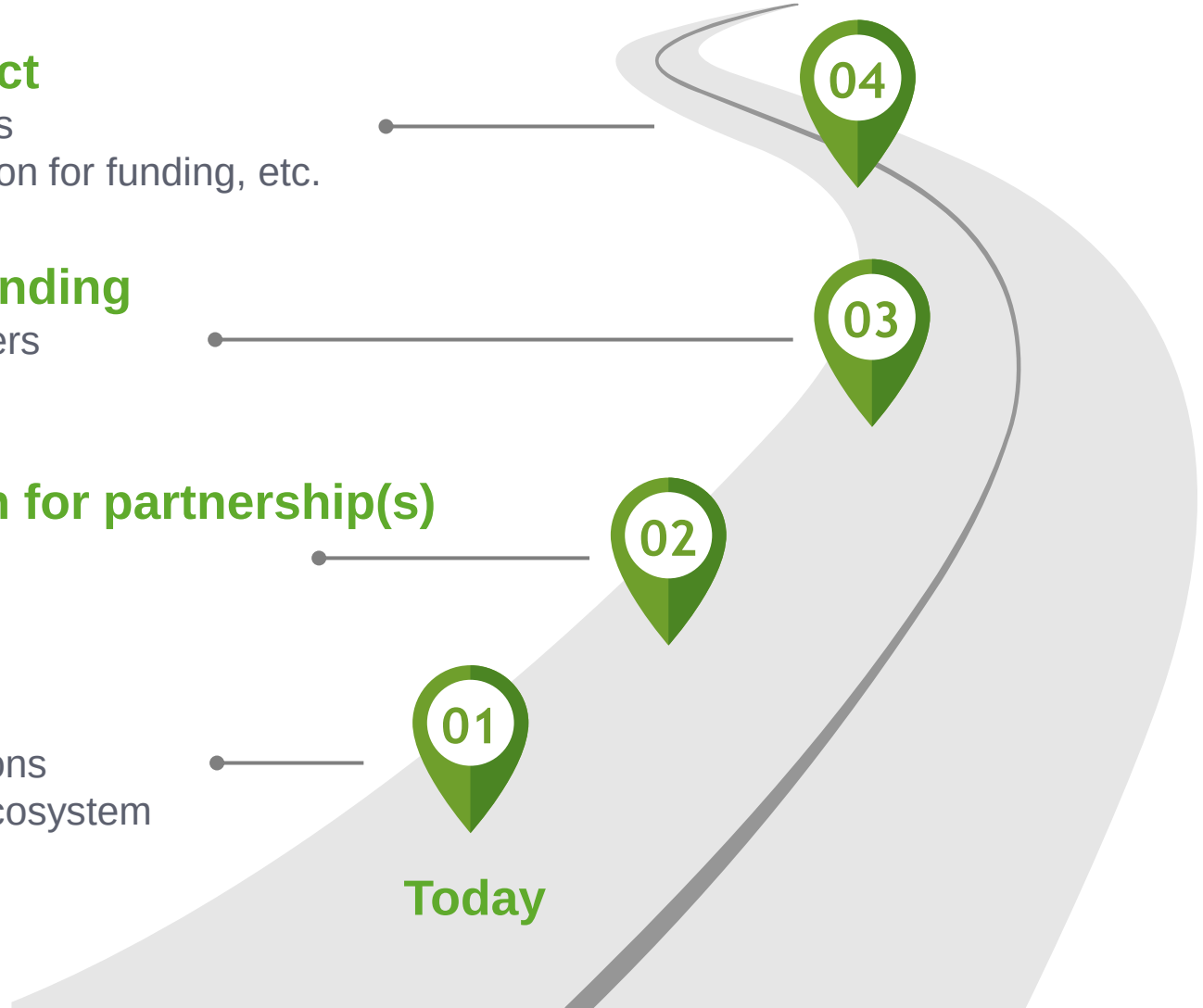
Project status and immediate way forward

4 **Initiation of the pilot project**
- » Detailing of technical documents
- » Supplier pre-selection, application for funding, etc.

3 **Memorandum of understanding**
- » Agreement with potential Partners
- » Public announcement(s)

2 **Concept in detail & search for partnership(s)**
- » Discussion of business model
- » Terms of agreement

1 **Introductory discussions**
- » Capabilities and market conditions
- » Hydrogen vision of high-level ecosystem



Transforming our Business

Profit from ADX assets for renewable energies and decarbonization technologies

> **Low emissions production, renewable energy and decarbonising technologies including hydrogen are not just good for our planet - they are good business!**

Ian Tchacos
Executive Chairman of ADX Energy Limited

Committed to the Generation of Tomorrow