

## JPMorgan – Alt Energy Roadshow

Arvid Moss, EVP Energy

November 8 and 9<sup>th</sup>

## Increased momentum for decarbonization and energy transition provides industrial opportunities



Cleaner energy and cuttingedge clean technological innovation

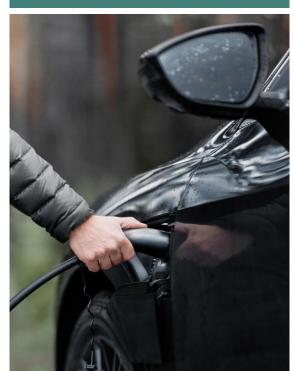
Renovated, energy efficient buildings

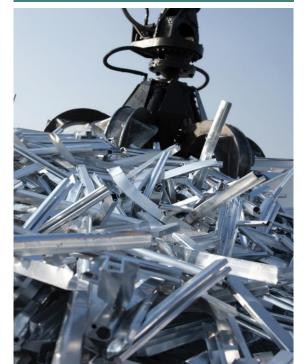
Sustainable and smart mobility

Longer lasting products that can be repaired, recycled and re-used









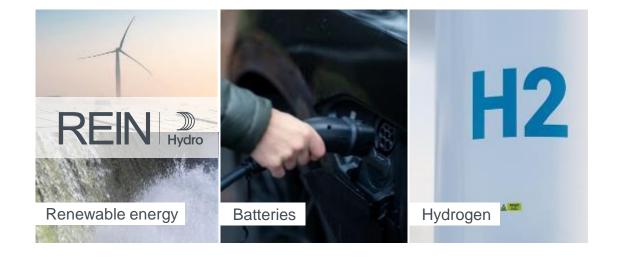
## Hydro aims to take a leading role in the energy transition



1 Strengthen position in low-carbon aluminium



2 Diversify and grow in new energy





### Hydro Energy's operational and market fundamentals

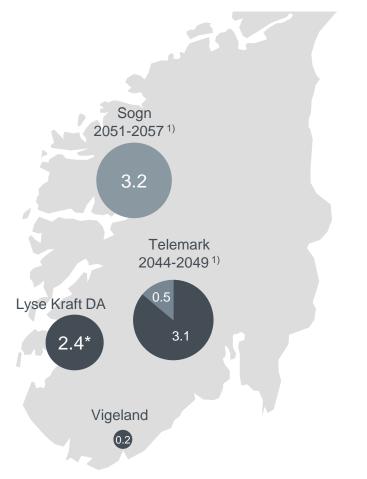
Normal annual production, Equity share

9.4 TWh

Operator hydropower

12.9 TWh

- No reversion
- Subject to reversion
- Bubble size = production in TWh



#### Volumes under commercial management

- ~7 TWh contract portfolio Nordics
- ~1 TWh contract portfolio Brazil
- ~4.5 TWh gas consumption
- Serves 100 + plants with energy services/power contract management

#### Key commercial processes

- Asset value optimization
- Supply & balancing
- Transmission and networks
- Sourcing and hedging power and gas
- Invoicing and invoice checking
- Market intelligence and regulatory affairs
- Energy efficiency consulting
- Green project development

<sup>1)</sup> Reversion year

<sup>\*</sup> Production figures for RSK and Lyse Kraft DA are based on a historical average reference as assumed in the transaction. Figures for Sogn and Telemark reflect estimated middle production

# Hydro Energy: Turning sustainability into strategic opportunity



1

With renewables, energy efficiency and electrification we can tackle 70% of global emissions

2 Green HAVRAND to tackle 30% from 'hard to abate' sectors

World-class energy competence center



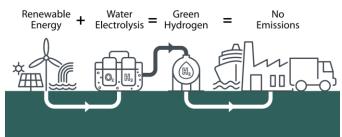
**Hydro REIN** 



**Batteries** 



Hydro HAVRAND



The renewable energy leader enabling the decarbonization and energy transition for industries

# Realizing our potential as the renewable energy leader enables decarbonization of industry



1

With renewables, energy efficiency and electrification we can tackle 70% of global emissions

World-class energy competence center



- >2/3 of Hydro aluminium made with renewable power produced and/or sourced by Hydro Energy
- World-class energy expertise and project competence

**Hydro REIN** 



- One-stop-shop energy partner for industrials
- Renewable energy sourced from solar and wind projects in the Nordics and Brazil
- On track to invest into 1 GW of projects in 2021

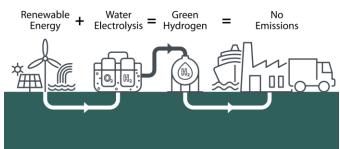
**Batteries** 



- Aim to become the preferred partner for scaling and industrializing battery projects in Europe
- Current investments: Northvolt, Corvus Energy and Hydrovolt
- Active industrial owner uses Hydro's core capabilities to industrialize and scale innovation

2 Green hydrogen to tackle 30% from 'hard to abate' sectors

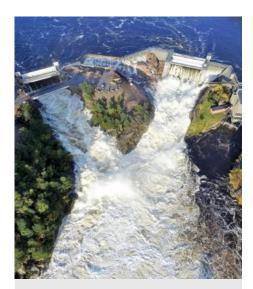
**Hydro HAVRAND** 



- Green hydrogen company with global reach
- 4 GW potential offtake and 80+ potential locations in Hydro
- Several MoUs already in place

## Business Area Energy: Executing on strategy





Hydropower

Batteries



Hydro REIN



Hydro Havrand



Hydro Projects

Operational scale, commercial competence

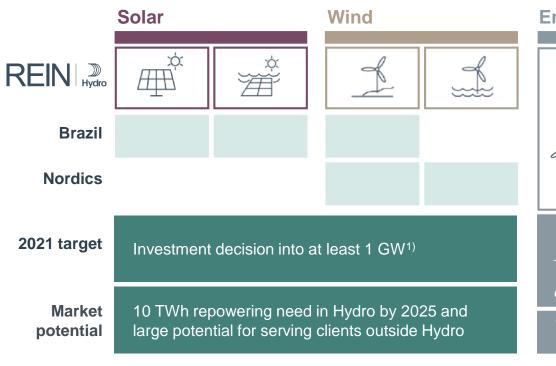
Build and deliver on project pipeline in renewable energies and technologies
Building area specific competencies on technologies,
business, geographies through positions

Project development, management and implementation

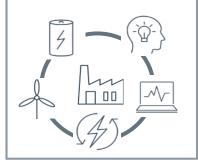
Business area with supporting competence as foundation for speed and derisking in implementation phase

## REIN: Building a substantial portfolio of renewables assets and services in attractive growth markets









Storage	On-site generation
Energy	Green
efficiency	sourcing

100+ sites identified in Hydro's portfolio

#### Portfolio ambitions

- 1 Early entry
- 2 Developer / operator position
- 3 Long term ownership strategy
- 4 Value enhancing services to projects and customers

### HAVRAND: Creating a global renewable hydrogen leader



#### Powering greener industries

Owned by Hydro, a global aluminium and energy company



Hydrogen's future is fossilfree: we do **green-only** 



Hydro potential offtake gives platform for growth

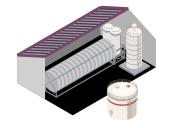
4 GW potential offtake\*

80+
potential locations



Global reach

Fully integrated – owner, developer and operator



- Maturing projects in Norway and Europe
- 2025: First mover portfolio realised
- 2030: Global footprint

International developer, for industry and transport







<sup>\*</sup> Potential long-term offtake includes Speira, previously Hydro Rolling

# Enablers for a shift from fossil fuels to green hydrogen – getting to an 'ambition loop'





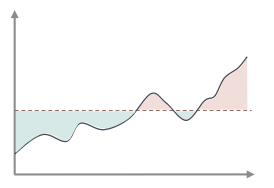
Renewable energy development



Stimulate commercial demand



Address investment risks of first-movers

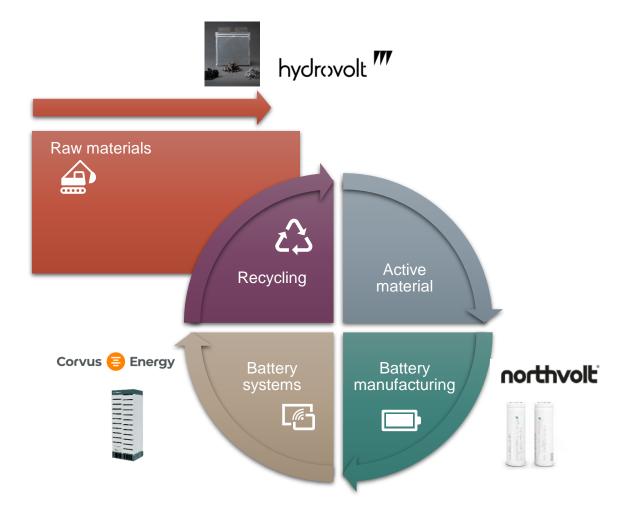


Bridge the cost gap and price uncertainty

Ambitious, targeted and near-term policy action needed to overcome barriers and reduce costs

### Batteries: Strategy stays firm

Ambition to build a sustainable and substantial battery business



### Expanding battery footprint with selective partnerships across value chain. Strong project pipeline

- Recycling and second life
- Cell and pack solutions
- Anode material and technology
- Selected next generation technology

#### How we create value

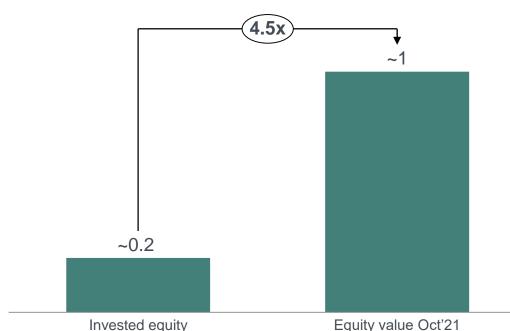
- Active industrial owner use Hydro core capabilities to industrialize innovation
- Growth and scaling potential required, also strong team and owners with distinct contributions
- Early entry for impact and value creation
- Seeking substantial industrial minority positions in selected parts of the battery value chain

## Strong track record and excellent pipeline in batteries



#### Batteries – portfolio value

NOK billion



- Uplift driven by early investments in Northvolt and Corvus
- Hydrovolt ramped up for operations end of year, fully booked 2022
- Continuing to explore opportunities in selected parts of the battery value chain
- Exploring further opportunities in selected parts of the battery value chain
- Investment frame 2.5 3.0 BNOK until 2025







