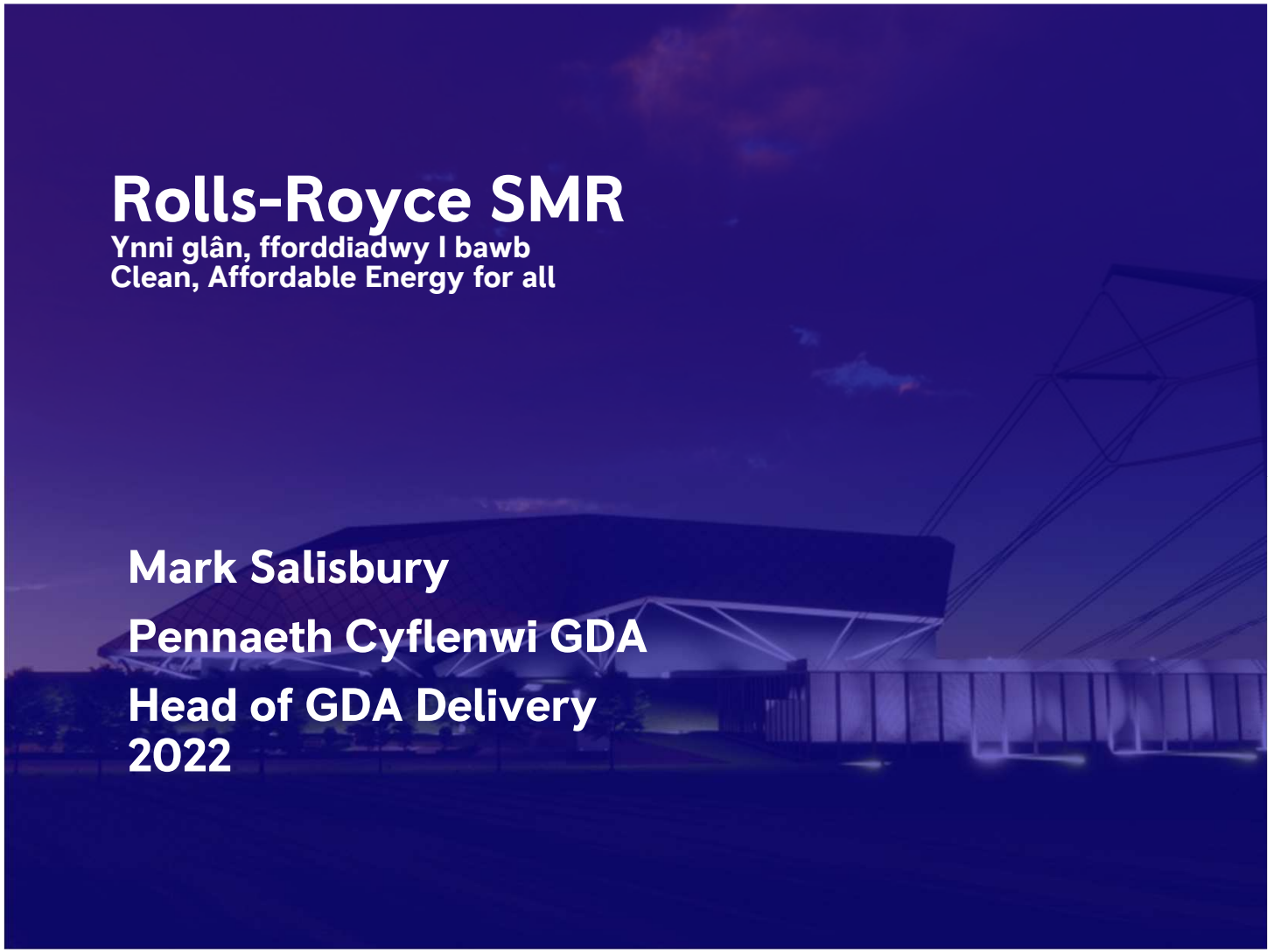
Rolls-Royce SMR

Ynni glân, fforddiadwy I bawb
Clean, Affordable Energy for all



Mark Salisbury

Pennaeth Cyflenwi GDA

Head of GDA Delivery

2022

This information is provided by Rolls-Royce SMR in good faith based upon the latest information available to it; no warranty or representation is given; no contractual or other binding commitment is implied

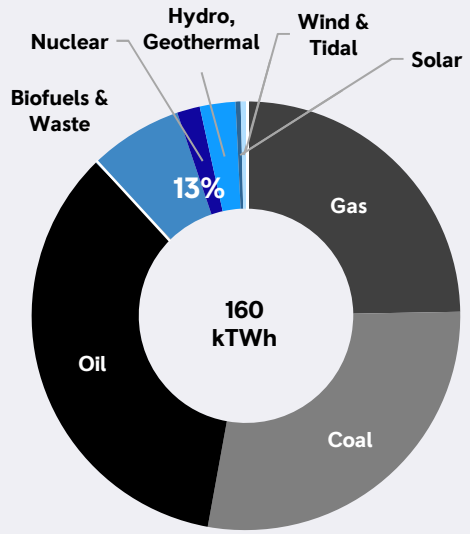
Department for Business, Energy & Industrial Strategy

UK Research and Innovation

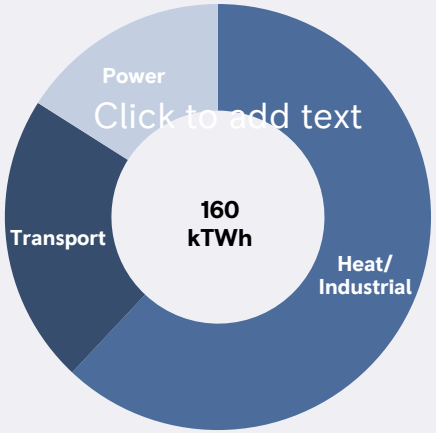
Non-Confidential
© 2022 Rolls-Royce SMR | Not Subject to Export Control

Tomorrow's energy market will look fundamentally different – and will need new solutions that can deliver low carbon power 24-7

Global energy by source



Global energy by use



Only 13% global energy is low carbon today

Key attributes	Rolls-Royce SMR
Design life	60 years
Scalability	1 unit = 470MWe Multiple units per site
Capacity factor	95%+
Security of supply	High
Emissions /MWh	Low
Land coverage / MWh	Low

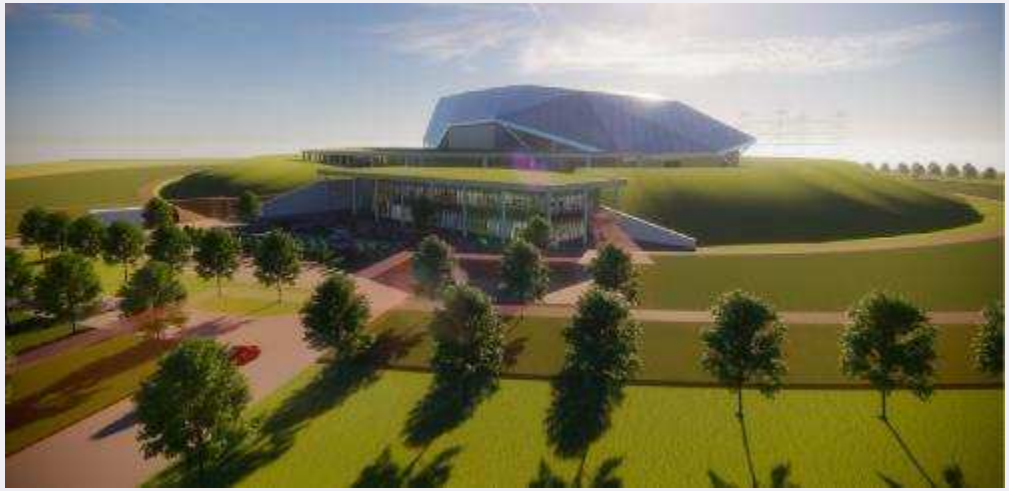
Proven technology

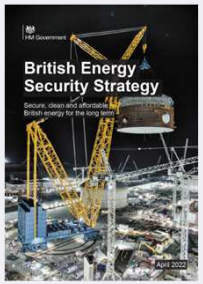
Rolls-Royce has been **designing and manufacturing** nuclear power plants for submarines for **over 60 years**

Latest Gen III+ of the Rolls-Royce **Pressurized Water Reactor (PWR)**

Non-Confidential
© 2022 Rolls-Royce SMR | Not Subject to Export Control

UK National Policy





ANT Fund £385m

Sizewell C £100m

Future Nuclear Enabling Fund £120m

Non-Confidential
© 2022 Rolls-Royce SMR | Not Subject to Export Control

Rolls-Royce SMR Ltd is a technology vendor offering a complete SMR power plant on a turnkey basis.

Our development programme is fully funded with £490m through commercial equity and UK Government grant funding

Rolls-Royce SMR Ltd Shareholders

Rolls-Royce Group
60 years designing, manufacturing, supporting and operating nuclear technology

Constellation Energy Corp. (previously Exelon Generation Ltd)
Operates the largest U.S. fleet of zero-carbon nuclear plants with over 18.7 GW from 21 reactors at 12 facilities

BNF Resources UK Ltd
Extensive investments in the energy space and represented and advised by BNF Capital Limited, an FCA regulated UK-based investment advisory

Qatar Investment Authority
Invests in the energy transition and funds technologies that enable low carbon electricity generation

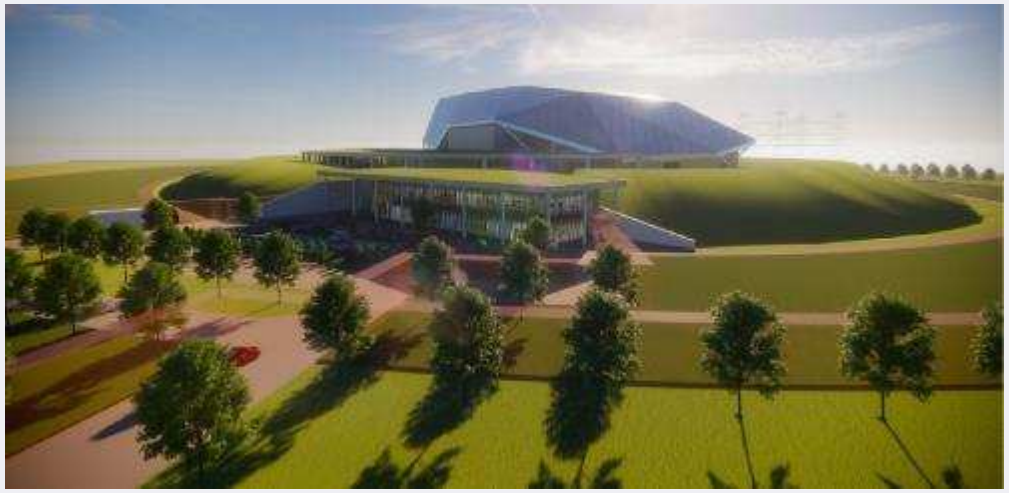
UK Government Grant Funding

UK Department of Business Energy and Industrial Strategy
Rolls-Royce SMR Ltd received the Low-cost nuclear (LCN) grant award by UK Research and Investment (UKRI)

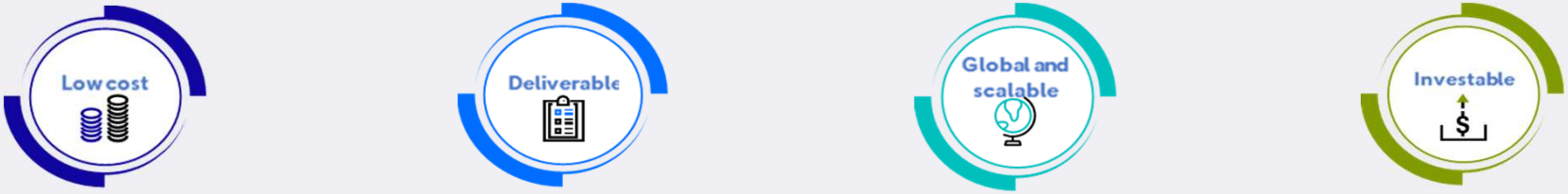
Non-Confidential
© 2022 Rolls-Royce SMR | Not Subject to Export Control

Rolls-Royce SMR is a totally new way of building nuclear to meet Net Zero needs

- ~470 MWe net output
- 50 Hz design
- Proven PWR Technology & Standard Fuel
- Power station turnkey delivery
- 4 yr on-site Construction (Fleet unit)



- Enhanced safety and security
- 1st unit on grid early 2030s
- Capital cost under £2bn
- Adaptable, multi-use power & heat output
- LCOE range £35-£50 per MWh**

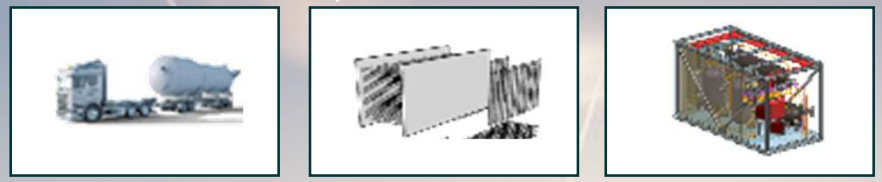


* 2021 economics, fleet unit; costs based on UK labour rates
** 2021 economics, 2 unit plant, range dependent on financing mechanism

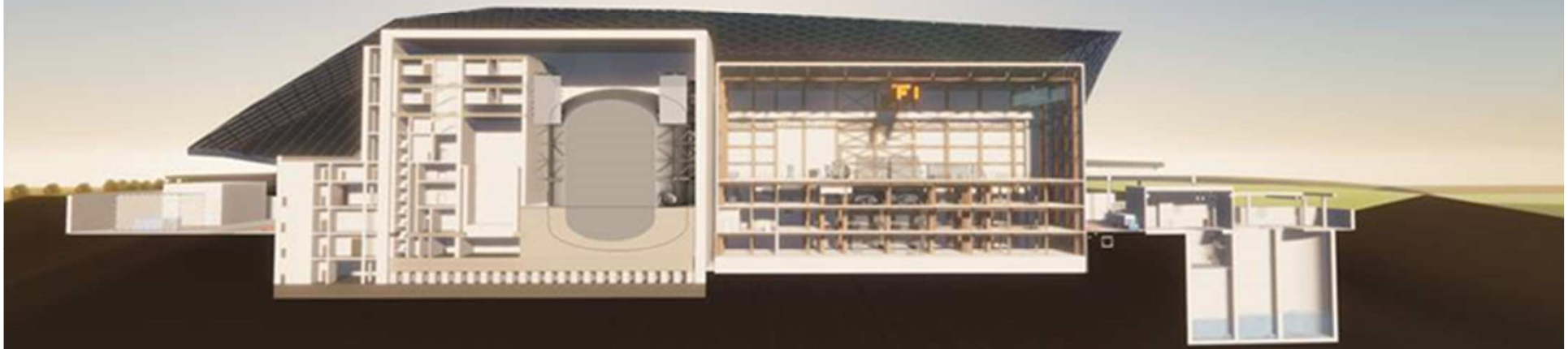
© 2022 Rolls-Royce SMR | Not Subject to Export Control

A whole power plant approach focused on standardisation, repeatability, commoditisation

Whole plant modularisation



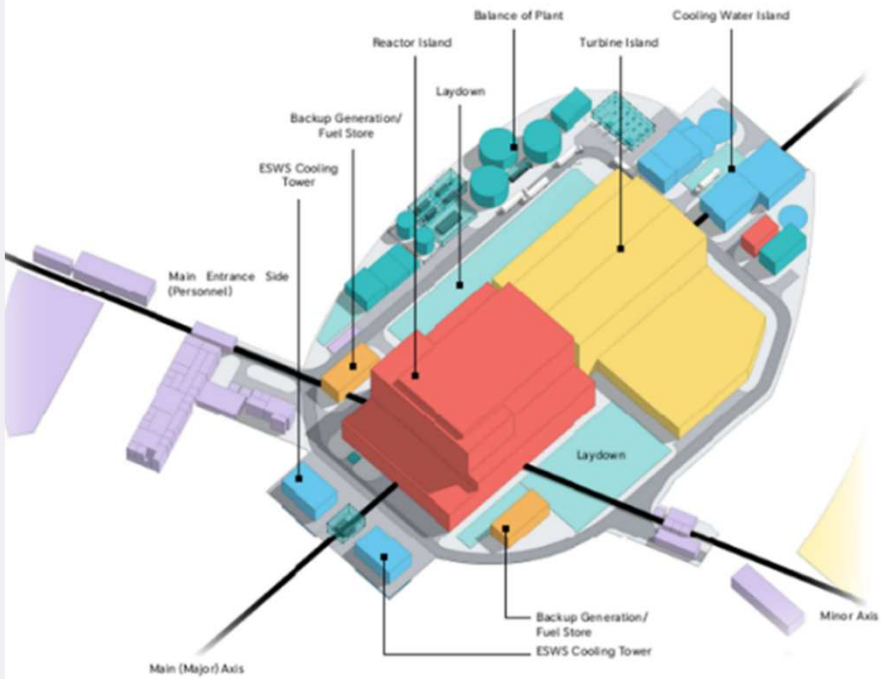
Standard commercial parts



Reactor Island **Turbine Island** **Cooling Water Island**

Non-Confidential
© 2022 Rolls-Royce SMR | Not Subject to Export Control

The Rolls-Royce SMR delivers 470MWe (net) in a compact site footprint



Standardized design

Primary Plant area: 0.049km^2

Nr of modules: ~1600 (all road transportable)

Largest module: Reactor pressure vessel

Highly energy dense solution: ~3000MW/km^2*

(Generated Power: Offshore Wind: ~2.25MW/km^2; Solar:~ 9MW/ km^2)**

* Assumes RR SMR operational plant @ 95% utilisation
** Assumes 50% wind utilisation rate & 20% solar utilisation rate

Non-Confidential
© 2022 Rolls-Royce SMR | Not Subject to Export Control

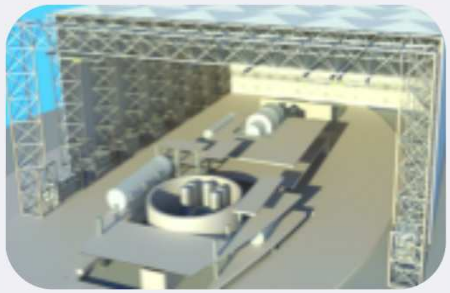
A factory fabricated product - Road transportability of modules is a pre-requisite Modularisation of the whole power station, not just the nuclear island

Module factories

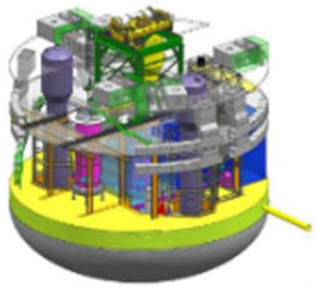
Primary modules

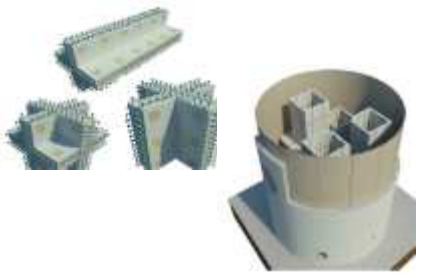
MEP modules

Civil modules



Site Assembly Factory





Non-Confidential
© 2022 Rolls-Royce SMR | Not Subject to Export Control

Turning nuclear into a product not a one-off mega infrastructure project

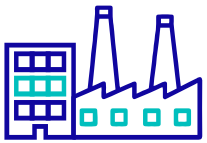
✘ EPC (mega project)

Conventional EPC (e.g. Large nuclear)

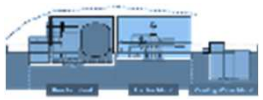
- Mega project GBP10bn+
- Reactor only, *not* whole plant
- Government driven
- Commercially complex

Designed for market requirements

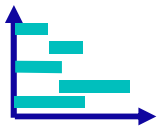
Factory Product



Standardization



Schedule certainty



Commercial simplification

Reducing Project Risk

✓ **EMA (factory product)**

Engineering
Manufacturing
Assembly

- **Much lower risk**
- **Reduced Capital**
- **Shorter Time to Build**

= Reduced financing cost

Non-Confidential
© 2022 Rolls-Royce SMR | Not Subject to Export Control

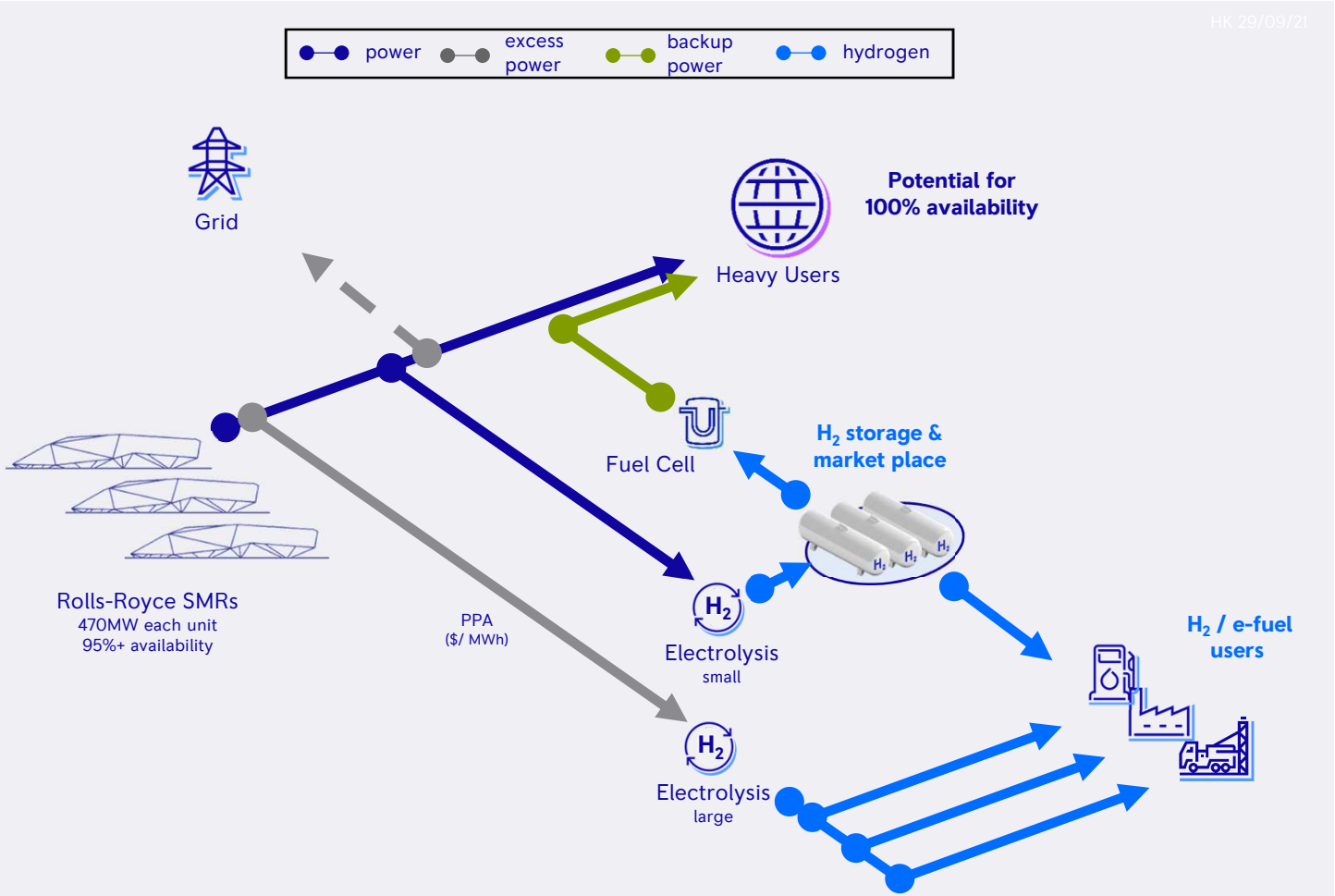
ROLLS ROYCE SMR

Energy Park

Rolls-Royce SMR's small footprint allows co-location: clean energy located with the industry that needs it

A magnet for industry and high skilled jobs desiring carbon free energy

Removes the need for costly transmission of electrical power over large distances



Non-Confidential
© 2022 Rolls-Royce SMR | Not Subject to Export Control

SECURITY CLASSIFICATION - Rolls-Royce SMR Data - Public - Not Listed