National Grid

**UK - Regulated**
- 342 UK transmission substations
- 7,200 km of UK overhead line
- 618 above-ground UK gas installations
- 7,660 km of UK high-pressure gas pipe

**US - Regulated**
- 377 US transmission substations
- 763 US distribution substations
- 3.6m gas distribution customers across Northeastern US
- 14,219 km of US overhead line

**Global – Non-Regulated**
- 2 Interconnectors and 3 in development
- 15,800 km of sub-sea high-voltage direct cable
- GrainLNG 20% of UK gas capacity
- Over 12m gas meters
Venture Investing Focus

**Smart assets**
- Smart grids, asset load management/peak shaving, plant virtualization, storage integration, industrial security, asset maintenance, microgrids

**Intelligent operations**
- Smart metering, advanced analytics, supply/demand matching, asset inspection & monitoring, risk & compliance, incident response, customer interaction, blockchain

**Energy management**
- Energy efficiency & management system, responsive devices, Access mgmt & fraud detection, remote energy control, virtualization, Software Defined solutions, energy trading

**Smart enterprise**
- Big Data/Analytics, SaaS, Cloud Infrastructure, AI, Cyber-Security, Mobility, Datacenter SW

**Smart car, home & cities**
- Connected car & home, Responsive charging, distributed storage, fleet management, devices management, prosumer integration

How are we set up

- **Corporation Venture Capital** (growth stage investing)
- **Incubation** (early stage investing)
- **Most startups**
- **Prototype**
- **Investable startups**
- One or more customers, scale-up
- Customer-validated product, first sale
- Innovation (ideation, implementation, culture development)
- Business development (accelerate external and internal startups)
AI – Enabling Technologies

Structured Systems Data
- Profiling power usage / analytics – DSR options
- Identifying alternative solutions – PV

Human Language
- Chatbot customer interface services
- Data interface solutions

Real Time Data
- Local / micro grid predictive grid management
- Supply / Demand energy forecasting
- Energy storage / mobility simulation and system reserve capability

Consumer Behaviour
- Customer specific tariffs – auto switching
- Energy efficiency product selection and optimisation

Human – Multi Spectrum Vision
- Data interface & classification solutions
- Multi-vision (IR, Ultra Violet, Lidar, visual interpretation) asset inspection analysis
- Maintenance, repair and replace prediction

Real Time decision Support
- Real time engineering augmented assistant
- Digital simulation and risk evaluation – predictive assessment
- System wide grid balancing support