

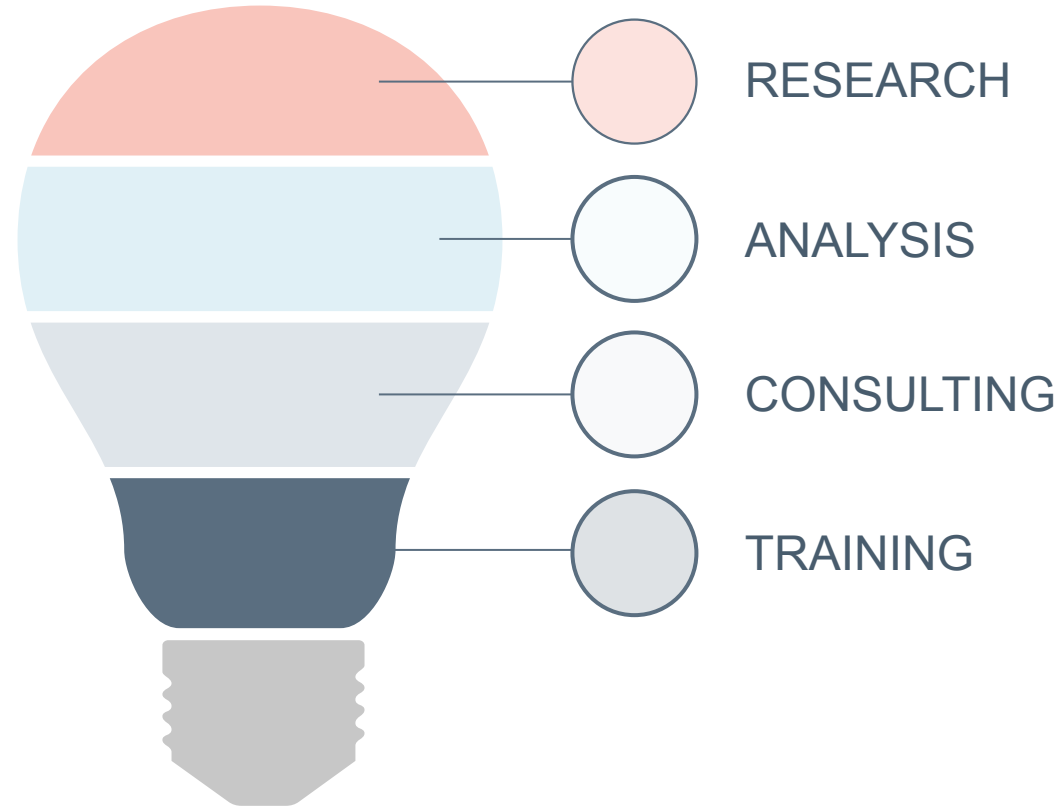
PPA opportunities and threats

2 May 2019

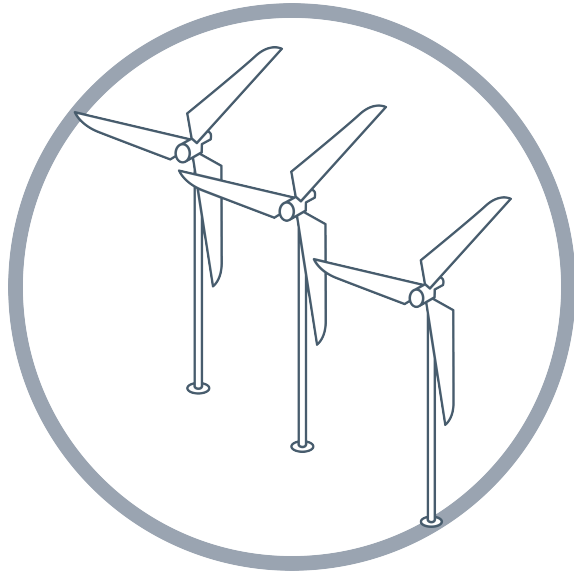
James Brabben

Who we are: Cornwall Insight

- Pre-eminent providers of market, regulatory, policy research, analysis, training and consulting in energy and water
- Independent experts across borders and international markets (including GB & Ireland, Europe and Australia)
- Trusted by customers for our unrivalled insight guiding them to success - we support clients from across investment, developers/ generators, suppliers/ retailers, governments and end users

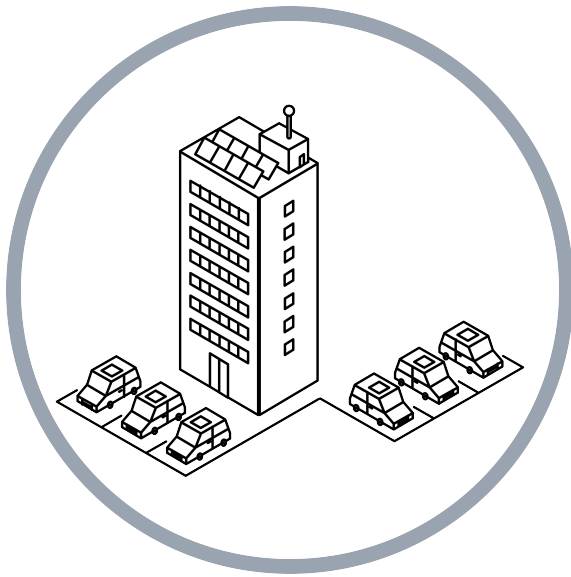


What does a “seller” want?



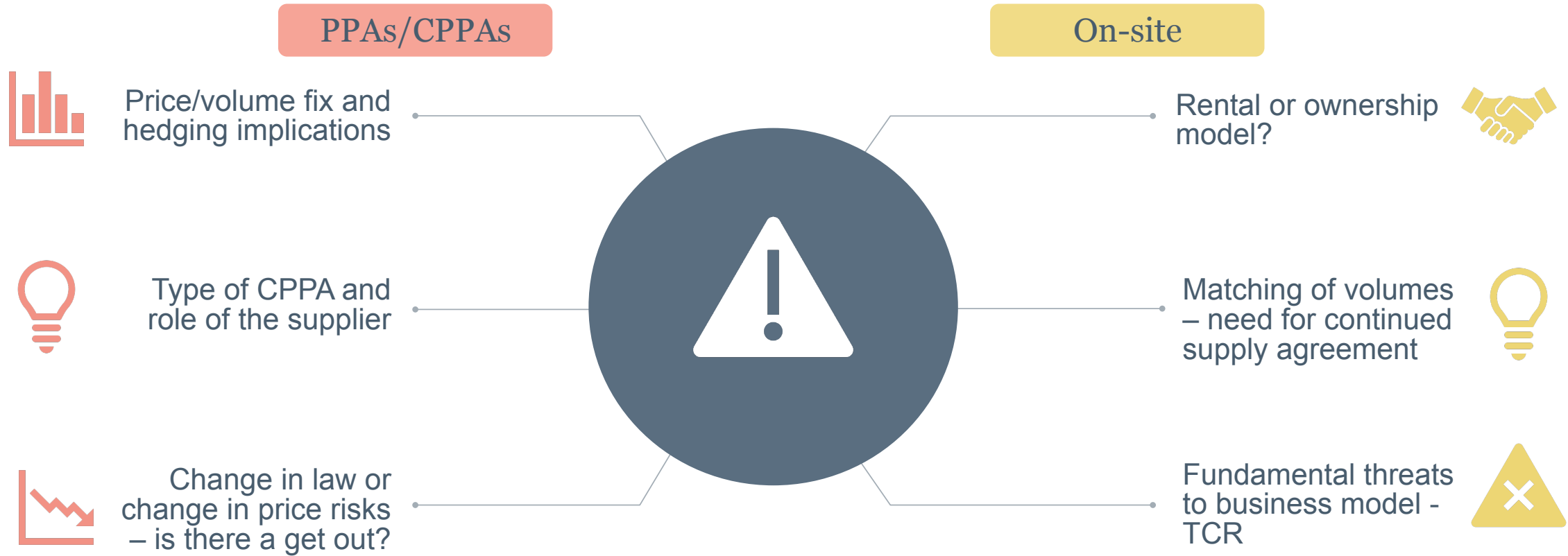
- **A long-term route to market** – without access to subsidy for onshore wind and solar then alternatives are needed for subsidy free developments
- **Stable payments** – de-risking of volatile revenue streams and costs – mainly wholesale power and imbalance
- **Regular payments** – project finance model requires de-risking of revenues and stable/regular payments
- **Creditworthiness** – of both the end-user and the supplier managing any deal

What the “buyers” can offer



- **Long-term offtake** – potential to agree 10 year + PPAs with new assets or 3-5 year deals for existing assets
- **A price hedge** – fixed price agreements on power provide the generator with a more certain investment case
- **Access to suppliers** – potential to use existing established suppliers to “sleeve” a Corporate PPA or provide back-up for on-site generation
- **Access to land** – if private wire/on-site then rooftop or land could be offered to build an asset
- **Creditworthiness** – varies by end-user, but some blue-chip or state-owned entities are particularly strong

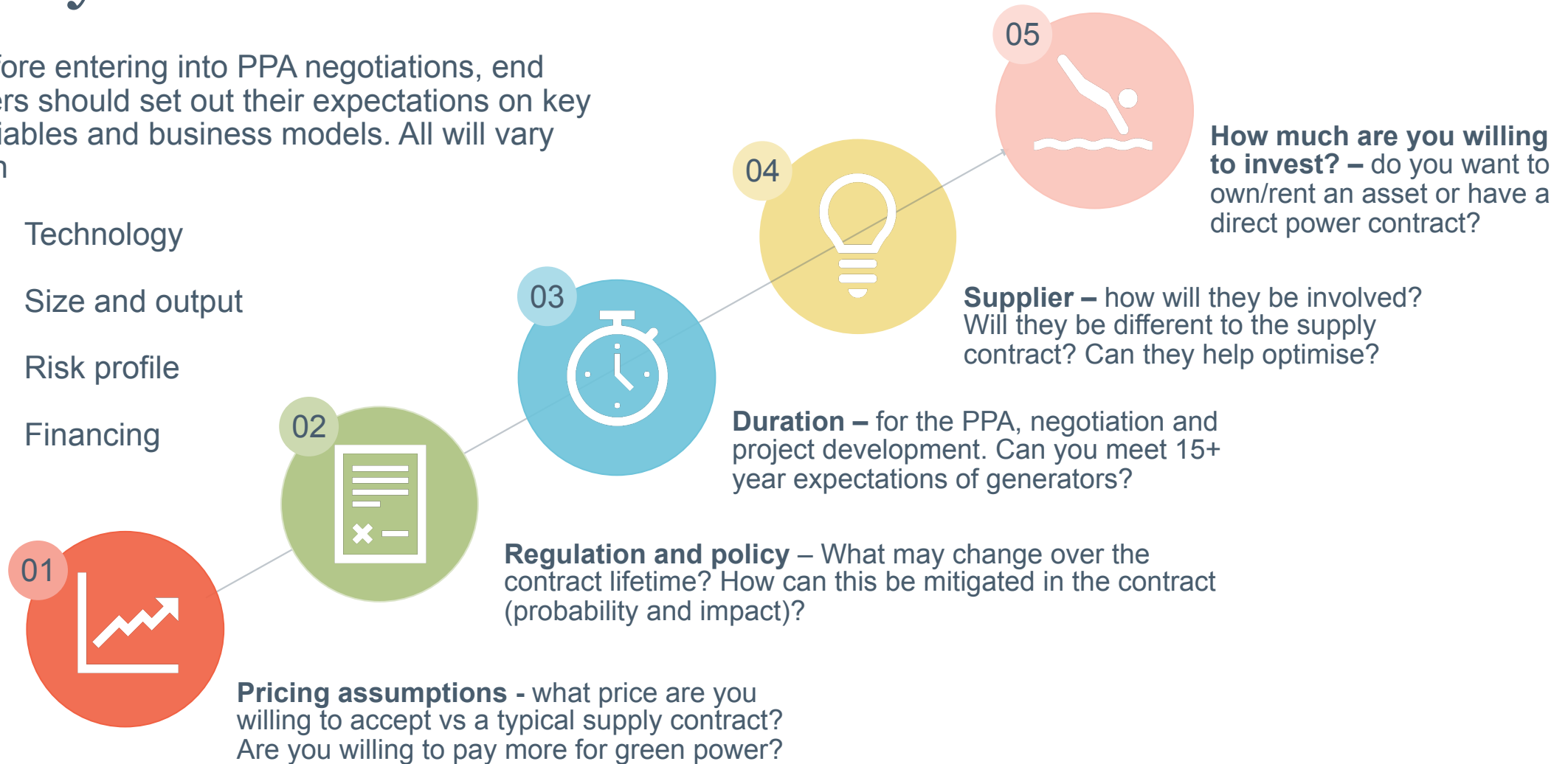
There are risks



A buyer's checklist – PPA criteria

- Before entering into PPA negotiations, end users should set out their expectations on key variables and business models. All will vary with

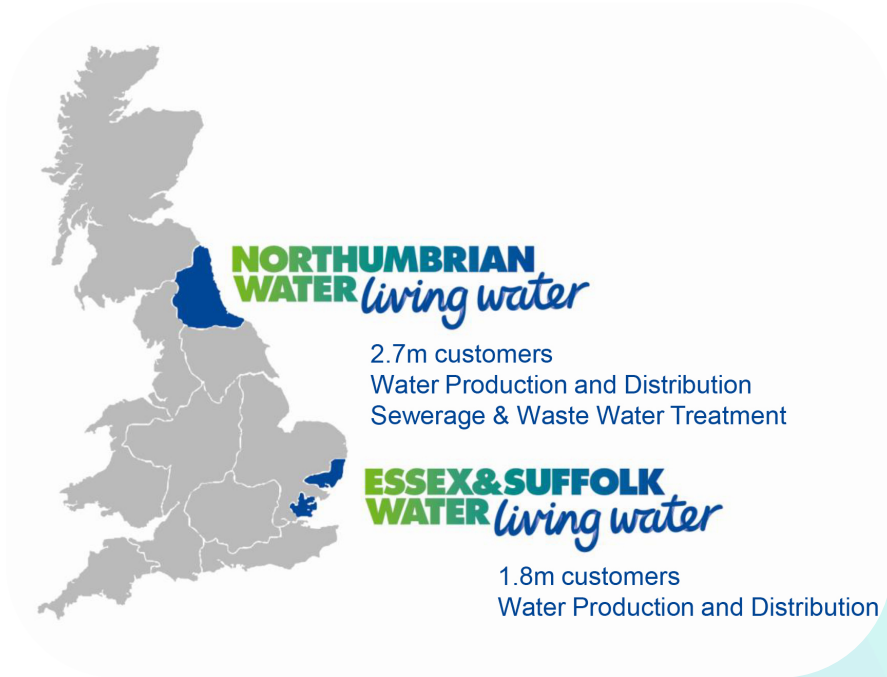
- Technology
- Size and output
- Risk profile
- Financing



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- Anthony Browne, Energy Development Manager
- Northumbrian Water

Customer

- Water and sewage for 2.7 million people in the North East
- Water to 1.8 million people in Essex & Suffolk

People

- 3,000 employees

Water

- 57 water treatment works
- 344 water pumping stations
- 16,000 miles of water mains

Sewerage

- 418 sewage treatment works
- 765 sewage pumping stations
- 18,000 miles of sewers

Energy

- 360GWh electricity import
- 8 hydro generators
- 80GWh biomethane exported

2019: The year of the PPA

Session Chair

Brendan Coyne – The Energyst

Speaker

James Brabben – Cornwall Insight

Chris Bowden – Squeaky Energy

Anthony Browne – Northumbrian Water