



TABLE OF CONTENTS



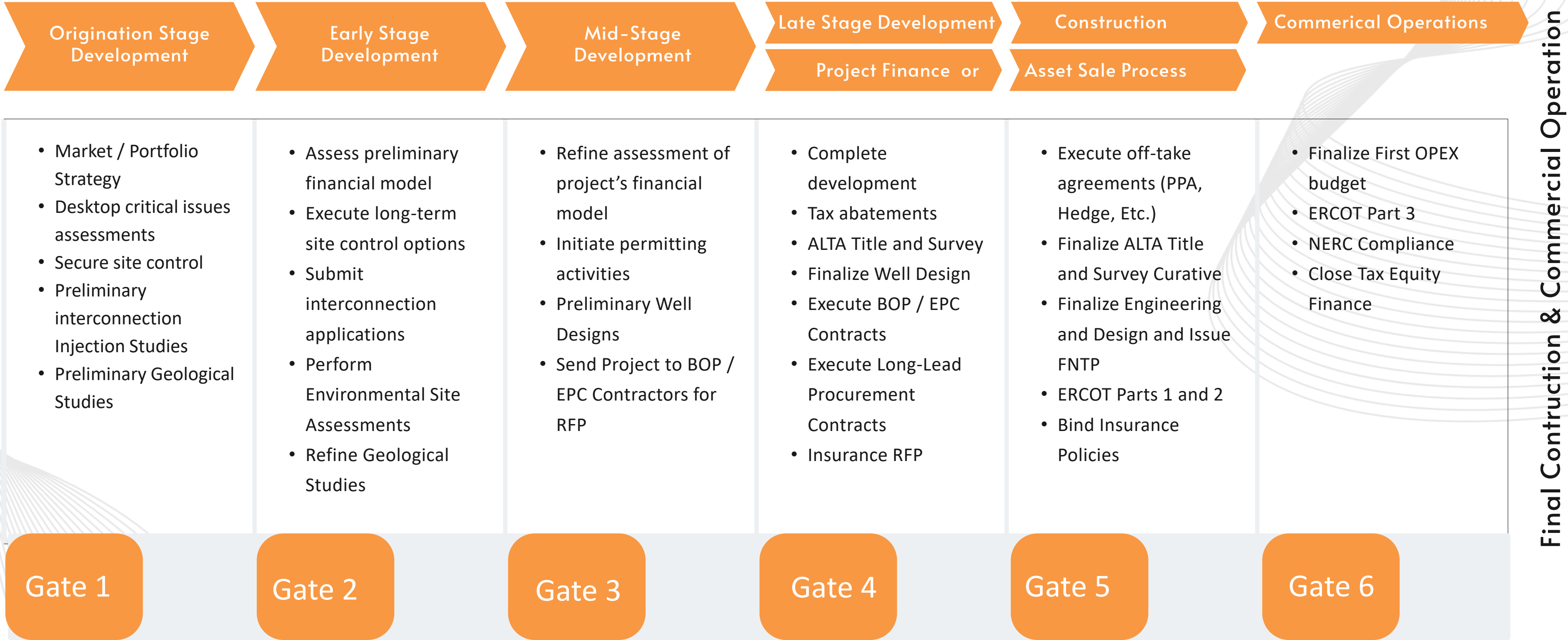
1. Introduction

2. Developing Towards Project Finance

3. Power Purchase Agreements

4. Finding Certainty in an Uncertain World

A Project That Can't Be Financed Can't Be Constructed



Power Purchase Agreements – Can't be Understood in a Vacuum

Generally the Seller Wants a Secure Revenue Stream, and the Buyer Wants a Predicable Power Resource

- Security and Predictability in Today's World can be Difficult
- Investors will not commit where they perceive uncertainty

Commercial Considerations

- Term
 - Short vs. Long Term
 - What is Commercial Operation Date?
- Pricing
 - Fixed or Variable. Pricing at Year 1 vs. Pricing at Year 10.
 - Fully Capacity vs. Merchant Upside
- Point of Delivery
 - Who takes Congestion risk?
 - Is a Hedge Necessary?
- Performance Requirements – The buyer has a power need. What if the Seller doesn't perform?
 - Degradation of System
 - Load Forecasting and Load Serving Requirements
 - When is a Seller's Guarantee required, and in what form?

Over the 20-Years Black Swan Events have Regularly Occurred

A black swan event is an unpredictable, rare event that has a major impact and is often rationalized after the fact as if it were predictable.

2001: Tropical Storm Allison

2005: Hurricane Rita

- Evacuations of millions and significant damage to infrastructure; Intensity underestimated

2008: Housing Market Collapse

2008: Hurricane Ike

- Caused over \$30 billion in damage; Storm surge and widespread power outages exceeded expectations.

2011: Fukushima Daiichi Nuclear Disaster

- Ripple effects in US Nuclear Image and Policy

2011: Texas Drought and Wildfires

- Record-breaking wildfires; Scale and intensity of the fires were unprecedented, exacerbated by extreme heat and wind.

2015: Memorial Day Flooding

2016: Tax Day Flooding

2016: Memorial Day Flooding

2017: Hurricane Harvey

- Over \$125 billion in damages; Intensity underestimated

2020: COVID-19 Pandemic

2021: Winter Storm Uri and Power Grid Failure

- Widespread property damage and over 200 deaths; Cascading failures and near complete shutdown.

2022: The War in Ukraine's Global Impact

2023: Central Texas Flooding

2023: Tornado Outbreak in North Texas

- The frequency and intensity of tornadoes unexpected.

2024: Hurricane Helene

Ongoing: Record-breaking heatwaves in 2022 and 2023 stressed Texas' power grid and public health systems.

- The rapid increase in frequency and severity of extreme heat events has been startling

Ongoing: AI and Technology Shocks.

- Conservative estimates are that an additional 14 gigawatts of generation are required by 2030

Unknown: Policies of Trump Administration