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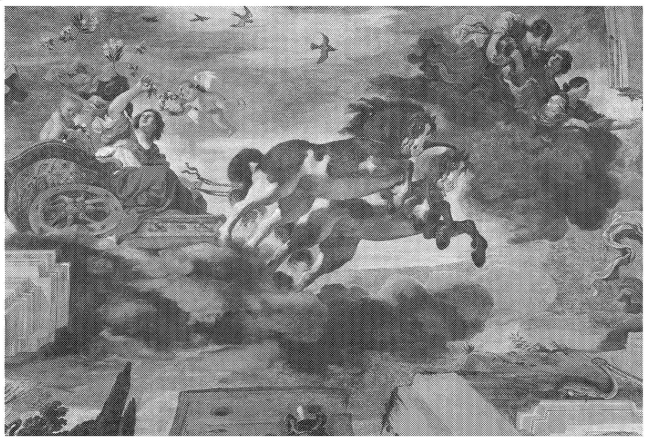

Project Aurora[1]

Louisiana Energy Park Workshop
Water Oak Park
Beauregard Parish, LA

May 20, 2021

[1] Aurora is the Greek goddess of the dawn signifying bp's move into a "new dawn" of Green Initiatives on the traditionally oil & gas heavy bpx assets
Image Source: By Guercino - The Yorck Project (2002) 10.000 Meisterwerke der Malerei (DVD-ROM), distributed by DIRECTMEDIA

Icebreaker & Introductions

Name:	Role:
Dave Lawler	bpA Chairman and President, bpx CEO
Mohit Singh	bpx VP, New Business Development
Adam Masek	bpx Business Development Project Manager
Stephanie Gannaway	bpx Business Development Land Manager
Steve DeGiusti	bpx General Counsel
Triscilla Taylor	bpx Managing Counsel
Faye Gerard	bpx VP, Low Carbon and Sustainability
Sam Knaizer	bpx Head of Advocacy and Government Affairs
Shandy Robl	bpx Head of Haynesville Land
Madison Scott	bpx Executive Assistant
Keith Botley	Chief of Staff to bpA Chairman and President
Kola Fagbayi	bpA Strategy and Governance
Damian Bilboa	bpA VP, Commercial Ventures
Adam Mirick	bpA Book Lead - Power Trading
Ken Fleming	Stamford ROL & SVP Origination and Marketing
Phil Cochrane	Sr. Director, C&A
Shazma Khan	bpA Real Time Trading and Scheduling Manager
Alexis Ferrari	Planning and Operations Manager, C&A
Richard Clark	bpA Commercial Developer
Matthew Williamson	bpA Business Development Director, Exploration
Robert Guido	Senior Advisor, Tax Policy
Rick Sosa	Consultant

Key Discussion Topics

- Introduction & Project Vision: D. Lawler
  Project Management & Accountabilities
- Property Overview : S. Gannaway
- Solar Project Timeline: M. Singh
- Legal update: S. DeGiusti
- Structure & Valuation: M. Singh
- Offtake Agreements: M. Singh
- Break All
- Proposed Technologies: K. Fagbayi
- Govt Affairs & Legislation: S. Knaizer
- Permitting Strategy: F. Gerard
- Key Risks and Concerns: All
- Next Steps and Wrap Up: D. Lawler

Introduction & Project Vision
-Project Management & Accountabilities

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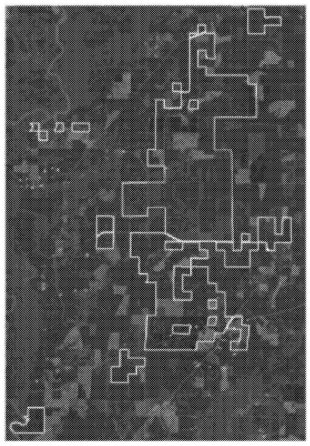
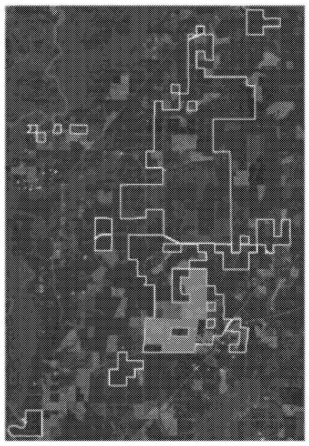
Louisiana Energy Park Concept

- Multiple, integrated low carbon business opportunities on 14,500 acre surface and mineral holding
  - 300 - 500 MW Solar Facility – BPLS
  - Green and Blue Hydrogen
  - Offtake – IST
  - Customers – internal and external outlets along the gulf industrial complex and I-10 Corridor
  - Reaching out to Toyota (supplying hydrogen trucks to the port of long beach)
  - Potential CCUS in BPX owned saline aquifers
  - Possible, small forest carbon offsets

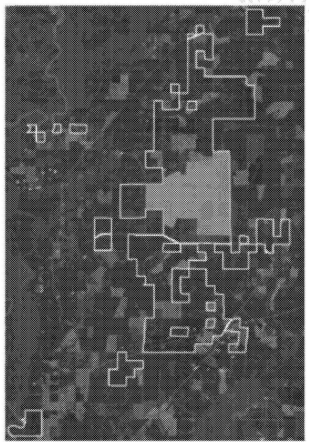
Site selection



Option 1
1,597 acres
≈70% Buildable



Option 2
1,475 acres
≈60% Buildable



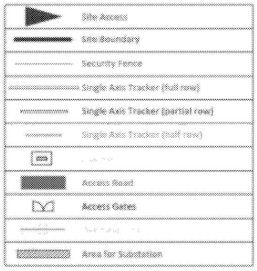
Option 3
2,757 acres
~72% Buildable

lightsource bp

Preliminary site layout

PV System Specifications

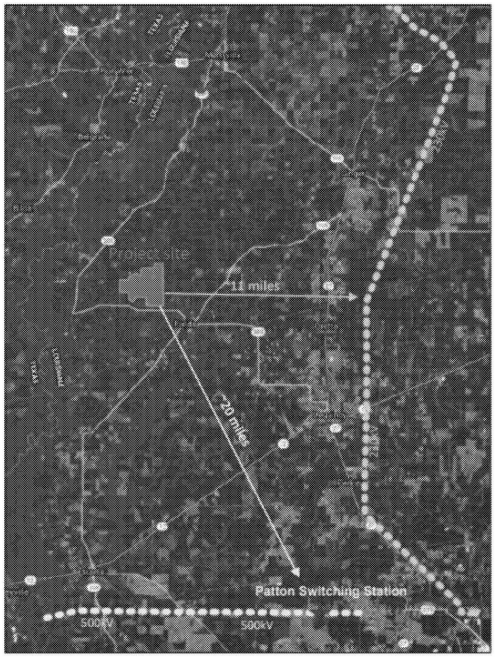
- 375 MWdc
- 300 MWac
- 445 W Bifacial Modules
- 3350 kVA Central Inverters
- 35% GCR
- 2,201 acres of fenced area



lightsource bp

Lightsource BP, advancing solar

Possible Point of Interconnection



Interconnection strategy

Three potential interconnection strategies:

1. 500kV Nelson – Hartsburg transmission line (Existing 500kV Patton Switching Station appears to have spare bays; need to confirm with site reconnaissance); Potentially ~350MW capacity
2. 230kV Nelson – Cooper transmission line (would require constructing a 230kV switch yard); Needs further study, ~100-150 MW capacity
3. 138kV Cooper – Bon Weir transmission (would require constructing a 138kV switch yard); Potentially ~150MW capacity

- Multiple miles of overhead transmission to reach POI
  - Constraints - Oil/gas wells, pipelines and wetlands
  - Several large timber landowners could make up much of the required ROW.
- MISO interconnection process takes approximately two years to final GIA
- 2021 queue window closes July 22

lightsource bp

Lightsource BP, advancing solar

Project Management & Accountabilities

- Initial Project Scope is Solar Development while Retaining Future Development Optionality
  - Future expansions in Green/Blue Hydrogen, CCUS etc.
- Project Aurora will be managed by Mohit Singh
- Requires a Collaborative and Interdisciplinary Effort
  - Environmental/ Regulatory (Kola F, Faye G, Sam K)
  - Land (Stephanie G, Shandy R)
  - Legal (Steve D, Triscilla T)
  - T&S (Ken, Shazma)
  - Tax (Eric E, Robert G)
  - Valuation (Genea T, Emily B)
  - RC&S (Damian B) etc.

Property Overview

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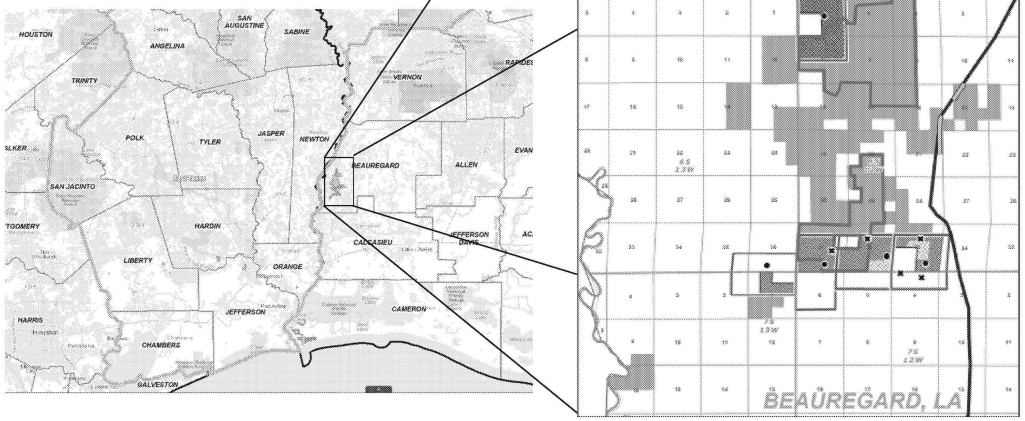
Property Summary

- 14,242 acres – minerals and surface
- Current Lessee: Hancock Forest Management
- Term: 60-year surface lease expiring June 30,2021
  - 5-year post-expiration period with buy-out option
- Revenue: 1/3 revenue share of sold Forest Products
  - Average $425k/year (2016-2018)
  - Significant recent Hurricane damage
- 2018 Property Valuation (surface only):
  - BPX BD Value: $23m-$30m
  - Hancock Value: $18m
  - 3rd party Value: $37.5m (unencumbered)

Property Map



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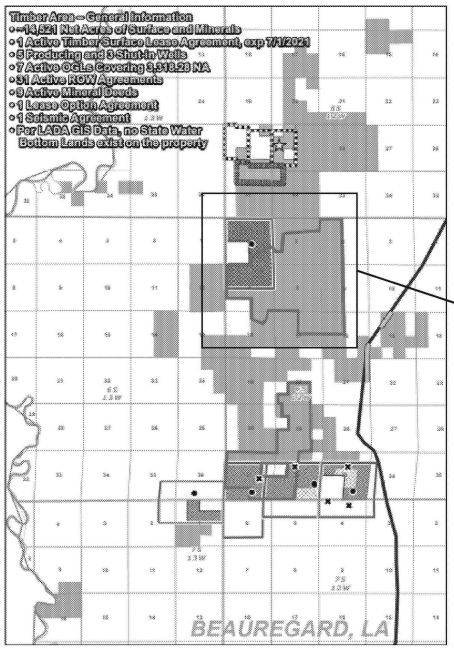
Oil & Gas Activity



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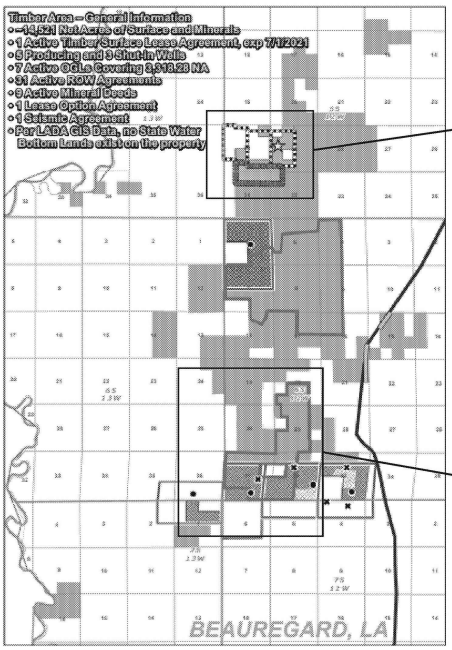
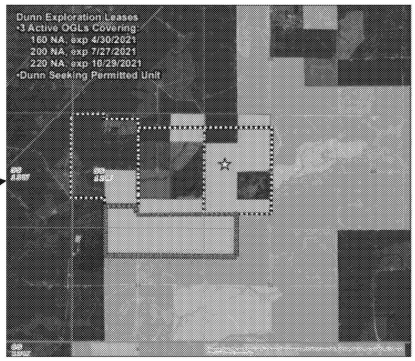
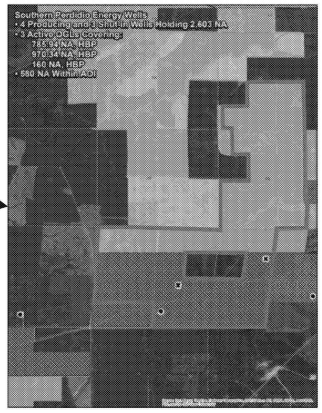
Oil & Gas Activity







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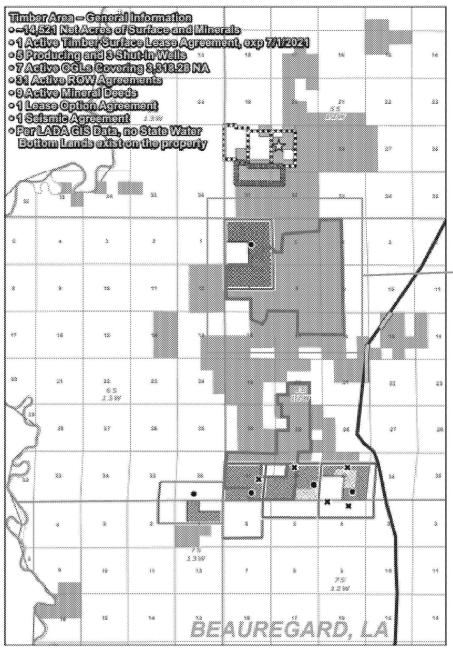
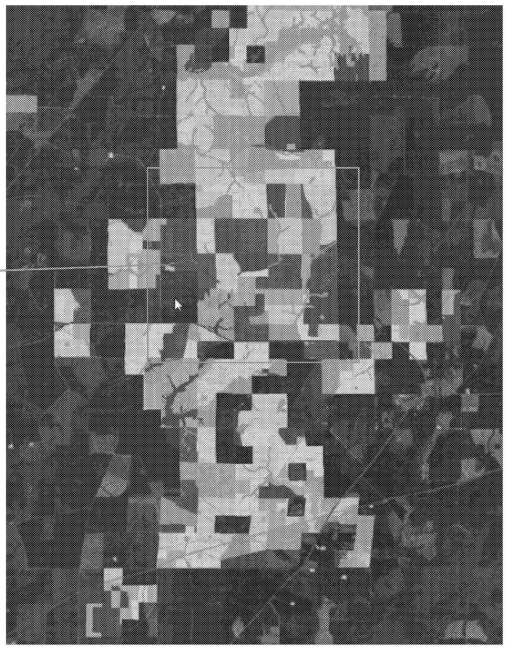
Hurricane Damage per Hancock Timber





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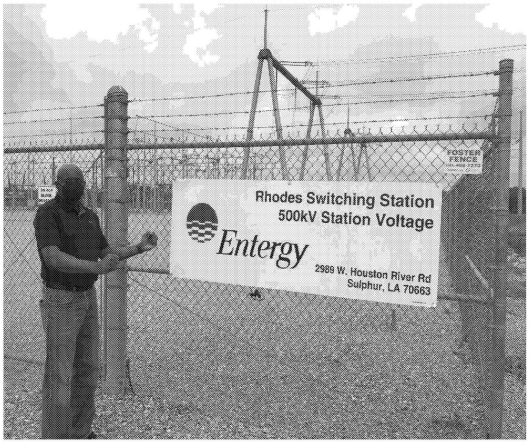
Louisiana Energy Park: Entergy Switching Station

Keith Botley Securing Capacity at Rhodes



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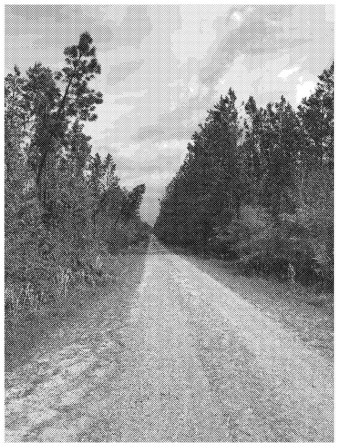
Louisiana Energy Park: Current Acreage Use

Timber Acreage Position



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Legal Update

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Redacted - Privilege

Solar Project Timeline

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Solar Project Timeline

- MISO Permit Due: July 22, 2021
  - Critical path item
  - LSBP action
- Phase 1 ESA: Requires Site Access & Land Owner Interview
  - Land/Legal to facilitate Access
  - ESA Interviewee: Faye Gerard?

Deal Structure & Valuation

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Structuring Considerations – Tax Impact

- Investment Tax Credit (ITC)
  - Used to offset tax liability
  - Available for qualifying capex (~95% of capital spend will fall into this category)
  - 20 year carry forward provision - BP has never had to take a loss on the credits
- ITC Timing
  - Currently ITCs cannot be utilized due to BP being in overall domestic loss (ODL) status due to Macondo
  - Anticipated to exit ODL in 2025, but this may change
  - Equinor JV offshore wind and other projects will use ITCs before additional projects
  - Anticipate being able to monetize bpx solar ITCs in 2030; this will erode project economics
- Proposed Legislation – Direct Pay
  - Government provides 26% cash (rebate) instead of the tax credits for 85%-100% of qualifying spend
  - Legislation to be proposed this Summer
- Tax Equity
  - Cash investor receives all of the tax attributes (ITCs, losses, depreciation, etc.) in exchange for financing the project
  - Investor exits the project once they have met their IRR
  - Can be an expensive method to finance considering BP's low cost of capital

Source: Eric Ensminger – bp Tax Group

Investment Tax Credit (Solar)

- The ITC is available to taxpayers that **invest in** certain qualified renewable energy projects. For solar energy property, the 26% ITC rate is available for projects that begin construction in 2021 or 2022, and a 22% ITC rate is available for projects that begin construction in 2023
- bp does not currently own any solar assets nor are there any plans in place to own and develop any commercial solar farms.
- However, Lightsource-BP ("LSBP") does own and develop US solar farms so any extension or enhancement of the ITC may create substantive additional value for LSBP as it looks to develop further solar farms. LSBP uses its ITCs to raise Tax Equity financing, thus reducing its capex exposure.

Project Modeling/Evaluation

- Two Big Wedges of Value
  - Tax Incentives
  - Power Purchase Agreements (PPA)
- Resources
  - Solar development expertise sits in Lightsource BP
  - Waiting to receive model from bp Renewables Growth Team
- Initial Evaluation
  - Seek regulatory approvals
  - Price is back calculated based on development and operating cost
  - Enter into an off-take agreement with a 3rd party (sell to grid)
- Inputs Needed
  - Buildout cost of site
  - Operating cost (compare to benchmarks); typically costs to maintain are small
- Other Information
  - Sites operate ~ 30 yrs

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Source: Emily Buckley – bp Renewables Team and Eric Ensminger – bp Tax Group

Offtake Agreements

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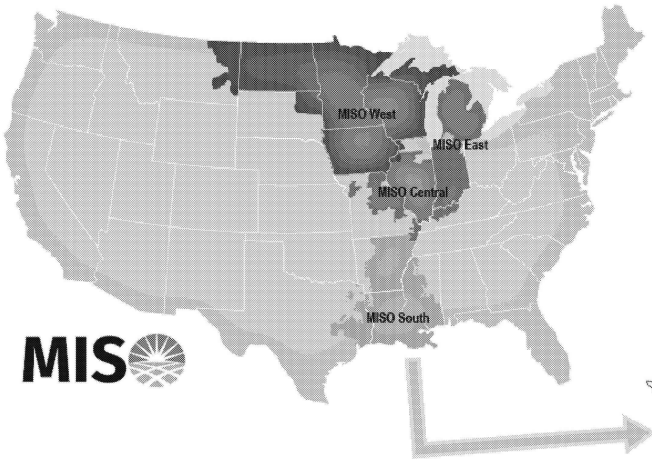
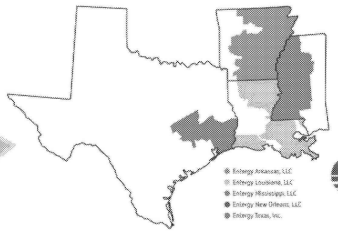
Internal & External Offtake Agreements

- Preliminary Internal and External Conversations have been constructive
- bp Internal (Clive & Stephanie)
  - BP has extensive tankage access via third parties, a 100kbd Condensate splitter with Kinder Morgan, Capline line pipeline near by where we hold equity and potentially Colonial Pipeline where we are a larger shipper and hold good relationships. Castrol Blend plant is the other area.
- External
  - Cheniere: consistent with their ESG mandates
  - Tellurian: want to green their company
- Work with T&S to structure and negotiate PPA

Market Context for Project Location



- Lake Charles/Sulphur area located in MISO footprint
- Wholesale traded market; MISO south as the most traded location in the region
  - Recently integrated into MISO. Lower liquidity overall
- Regulated market - Entergy primarily operates and use supply throughout region
- Entergy is primarily the off taker for most renewable generation in the area
- Will need to evaluate unique structures to work with individual corporates in the region



Entergy

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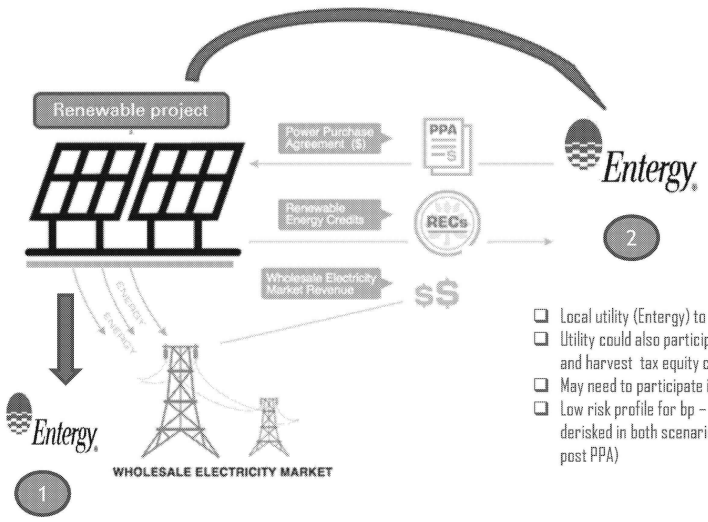
Utility relationship – Project or PPA Purchase



- Local utility (Entergy) to procure offtake
- Utility could also participate as an equity provider for the project and harvest tax equity credits.
- May need to participate in open RFP
- Low risk profile for bp – project financing is secured, and project is derisked in both scenarios for the financing term. (Merchant risk post PPA)

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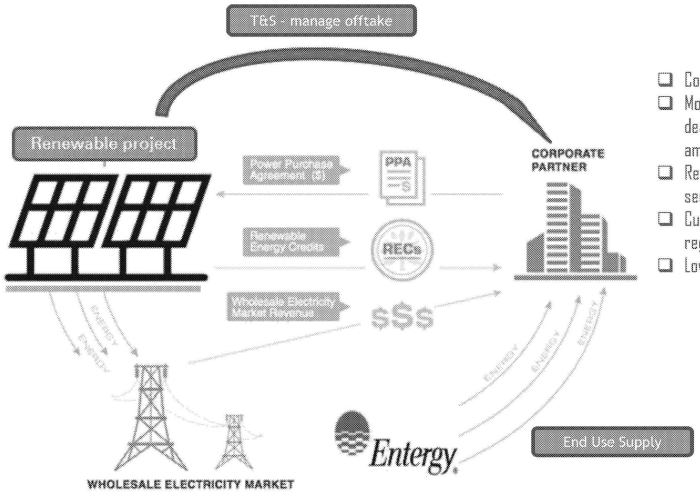
Corporate Off takers



- Corporate PPA; BP originates sale with corporates
- More likely to get a premium to market price when dealing with Corporates that have low carbon ambitions.
- Relationship via BPx and T&S can be leveraged to secure corporate hedges
- Customer based transaction are limited in this region.
- Lower risk profile for bp
  - Majority of project is derisked via single or multiple corporate PPA or hedges

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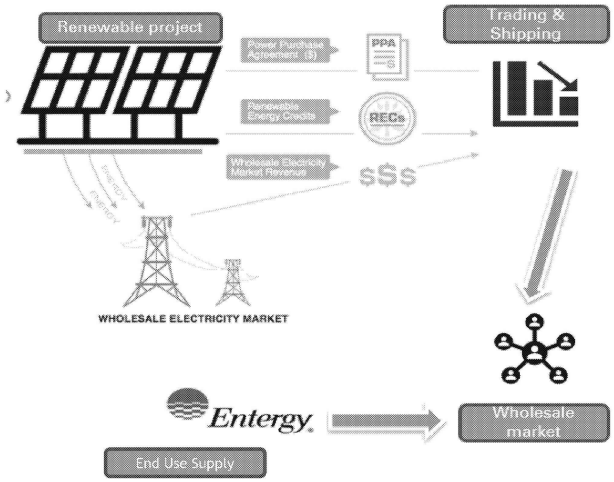
T&S – Manage Long Term Risk



- T&S warehouses commodity risk for the project.
- T&S liquidates in the wholesale market
- High risk – long term risk and need to find liquidity resides in T&S – long-term risk outside of liquid window
- Returns are likely to be below target levels.

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Break

15 minutes

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Proposed Technologies

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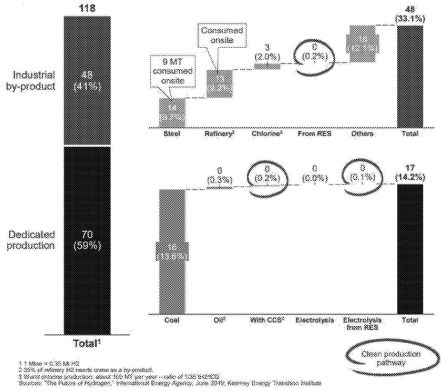
Future Technologies to Deploy

- Hydrogen
- CCUS
- BP Ventures portfolio
  - Geothermal
  - CarbonFree (precipitated calcium carbonate)
  - Calysta (gas to protein)

Hydrogen Overview

Global hydrogen production
(2018, Mt H_2, % of total production)



1 1 Mtoe = 0.35 Mt H2
2 35% of refinery H2 needs come as a by-product.
3 World chlorine production: about 105 Mt per year – ratio of 1.38 tH2/tCl2
Sources: "The Future of Hydrogen," International Energy Agency, June 2019; Kearney Energy Transition Institute

Source: Kearney Energy Transition Institute

Annual production of hydrogen
- Global production: 118 Mt, of which 70 Mt is from dedicated sources
- From fossil fuels: 69 Mt
- From electrolysis: 4 Mt, of which 3 Mt is a by-product of the chlorine industry

Current largest plants
- Fossil fuel plant: 450 kt per year
- Alkaline electrolyzer: 165 MW
- PEM electrolyzer plant: 10 MW or 1.8 kt per year

Annual use of global hydrogen production
- Ammonia and methanol synthesis: 43 Mt per year (37%)
- Oil refining: 38 Mt year (33%)
- Steel manufacturing: 13 Mt per year (11%)
- Other: 21 Mt per year (18%)

CO2 emissions from hydrogen production
- 830 MtCO_2 per year
- About 2% of global CO_2 emissions

Equivalence of 1 Mt of H_2 in terms of oil
- About 21 Mboe
- About a quarter the world's daily oil consumption

What does 1 ton of H_2 represent?
- Feedstock to refine about 285 barrels of crude oil
- 3,000 to 5,000 km of autonomy for a fuel cell train

What does 1 kg of H_2 represent?
- About 100 km of autonomy for a fuel cell car, equal to 6 to 10 liters of gasoline

How to store 1 ton of H_2?
- If uncompressed, about 56,000 bathtubs
- If compressed at 700 bars, about 120 bathtubs
- If liquefied, about 65 bathtubs

How much hydrogen would be required if the hydrogen car fleet ... :
- Reaches 100,000 vehicles: 15 kt per year
- Reaches 5 million vehicles in the BEV fleet: 750 kt per year
- Reaches 1.2 billion vehicles in the ICE car fleet: 180 Mt

How will we possibly use hydrogen in 2050?
- In industry: 245 Mt, of which 112 Mt will be for heating
- In transportation: 154 Mt, including synthetic fuels
- In power and gas: 140 Mt

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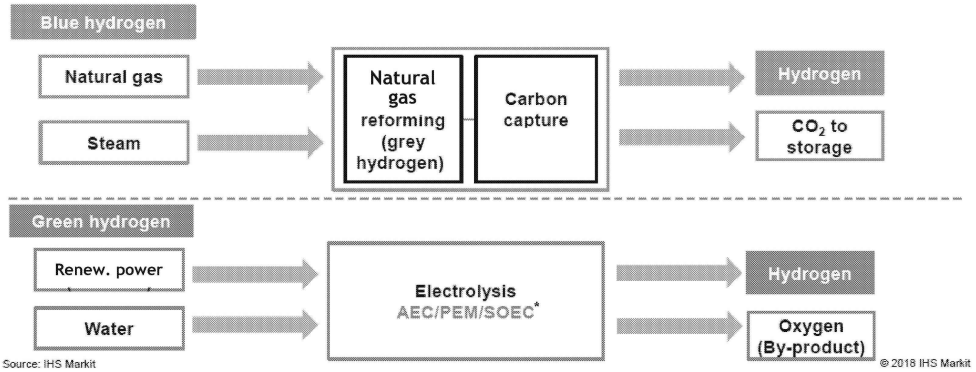
Blue and Green Hydrogen Production

The cost of H_2 varies significantly across regions as it depends heavily on the prices and availability of energy inputs (low-cost natural gas or low-cost renewable electricity) and access to CO_2 storage



Source: IHS Markit

*AEC - alkaline electrolytic cells; PEM – proton exchange membrane; SOEC – solid oxide electrolyzer cell

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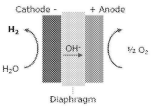
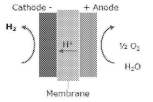
Hydrogen Production: State-of-the-Art

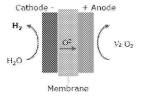
Electrolysis



Alkaline Electrolytic Cells (AEC)
- Mature
- Most common technology used worldwide



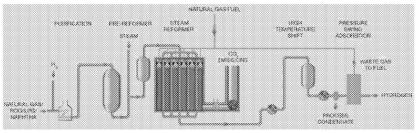
Proton Exchange Membrane (PEM)
- Commercial
- Most installed in new renewable-based projects



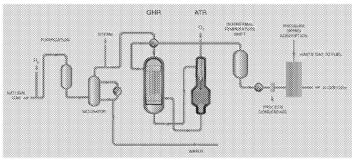
Solid Oxide Electrolysis Cell (SOEC)
- Under research
- High potential due to great efficiency

Reforming

Steam Methane Reforming (SMR)
- Generates most of the world's hydrogen



Gas Heated Reformer + Auto-thermal Reforming (GHR + ATR)
- High thermal efficiency, low natural gas demand



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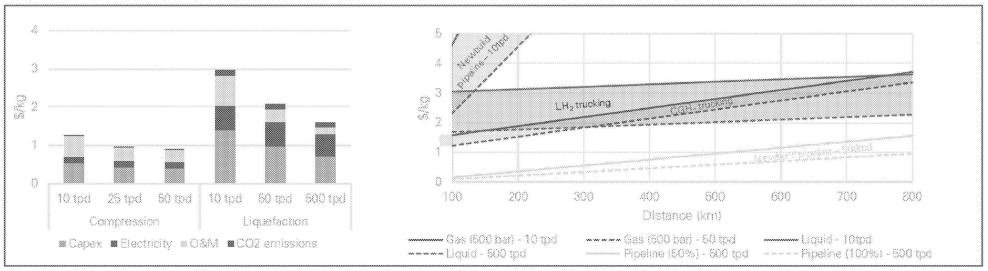
Hydrogen Logistics Options

- Distributed Network Buildout
  - Small scale network growth to meet early customer requirements, secure offtake
  - On site / localized production
  - Not economic for liquified H2
  - Green H2 well suited
- Centralized production
  - Large scale in region production
  - Supply chain developed to distribute lower cost centralized production
  - Potential anchor demand from a high-volume consumer (refinery, chemicals production)
  - Rapid network development
  - Multiple refueling trucks per station each day
  - Ideal for Blue H2 production



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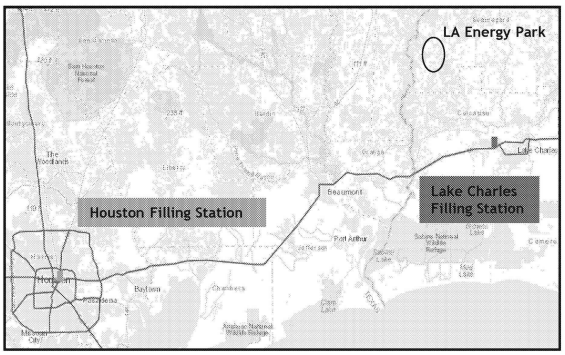
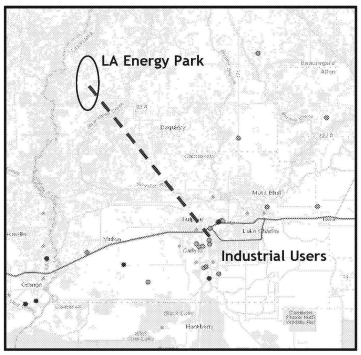
LA Energy Park: Hydrogen Network

- Mobility Opportunity
  - Hydrogen is compressed to 700 bar for delivery to filling stations
  - Filling stations located along I-10 corridor in Lake Charles and Houston areas
- Industrial Opportunity
  - Hydrogen produced at LA Energy park is delivered via 30 mile pipeline to Lake Charles area and consumed by industrial users
  - Estimated pipeline capex of $70m





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LA Energy Park: Greenfield Opportunities

Green Hydrogen

Greenfield 100MW AEC or PEM electrolyser

- Power from bp solar farm or local grid

Parameter	Units	AEC	PEM-High COE	PEM-Low COE
Electricity	MW	100	100	100
Cost of Electricity	$/MWhr	49	49	30
Water Demand	t/d	530	450	
System Efficiency	kWh/kgH_2	53	48	
Utilization	%	100	100	
Hydrogen Production	t/d	45	50	
ISBL + OSBL CAPEX	$M	235	211	
LCOH – Plant Gate	$/kg	5.60	5.16	4.24
LCOH – Industrial Users	$/kg	5.75	5.31	4.39
LCOH – Houston filling Station	$/kg	6.12	5.68	4.76

Blue Hydrogen

Greenfield 100 MMSCFD SMR with CCS

- CO_2 permanently stored in local formations

Parameter	Units	Blue Hydrogen
NG Demand	MMSCFD	41
CO2 Capture Efficiency	%	90
CO2 Captured	Mt/y	0.75
Hydrogen Production	t/d	240
ISBL + OSBL CAPEX	$	535
LCOH – Plant Gate	$/kg	1.90
LCOH – Industrial Users	$/kg	2.05
LCOH – Houston filling Station	$/kg	2.42

LCOH based on 10% IRR, $3.25/MCF NG price, 45Q credit assumed pays for sequestration, 15 cents/kg cost for pipeline to industrial users

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Hydrogen Pricing Benchmark

Greenfield opportunities benchmarked against retrofitting an existing SMR with CCS capability

Parameter	Units	AEC	PEM - High COE	PEM- Low COE	Blue H_2	Benchmark: Retrofit SMR
Natural Gas Demand	MMSCFD	N/A	N/A		41	7 (Incremental)
Electricity Demand	MW	100	100		20	3
Hydrogen Production	t/d	45	50		240	240
CO_2 captured	Mt/y	N/A	N/A		0.75	0.75
ISBL + OSBL CAPEX	$M	235	211		535	117
LCOH - Plant Gate	$/kg	5.60	5.16	4.24	1.90	0.41 premium over grey Hydrogen
LCOH - Industrial Users	$/kg	5.75	5.31	4.39	2.05	
LCOH - Houston filling Station	$/kg	6.12	5.68	4.76	2.42	

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Redacted - First Amendment

Government Affairs & Legislation

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Permitting Strategy

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Permitting Strategy

Permit or Action Name	Organization or Agency	Activity
Zoning or Ordinance	Beauregard Parish Police Jury Calcasieu Parish Police Jury (Gen-tie only)	No zoning or ordinance requirements exist.
Cultural Surveys	Section 106 of the National Historic Preservation Act; Louisiana Department of Cultural Resources (SHPO)	Full site cultural resources survey will be conducted. SHPO Coordination will be conducted, subsequently.
Louisiana Coastal Zone Determination/ Certification	Louisiana Department of Natural Resources (LDNR)	LDNR Coastal Use Permit to confirm that project is not located within the coastal zone or negatively affect coastal zone waters.
Biological Resources: Threatened and Endangered Species	LDNR, U.S. Fish and Wildlife Service	IPAC Survey has been completed and confirms there are no expected critical habitats for endangered/protected species within the project site. A full site Threatened & Endangered Species survey will be conducted to confirm. Consultation with U.S. Fish and Wildlife Louisiana Ecological Services Field Office and Louisiana Department of Natural Resource following survey results.

Permitting Strategy (cont.)

Permit or Action Name	Organization or Agency	Activity
Wetland Delineation and Clean Water Act Section 404 Permitting	Army Corps of Engineers, New Orleans Regulatory Branch	Wetland boundaries to be delineated using standard on-site delineation methods outlined in the U.S. Army Corps of Engineers Wetlands Delineation Manual (USACE 1987) and Regional Supplement to the USACE 1987 Delineation Manual for the Atlantic and Coastal Plain Region in September 2019. The Project will need to submit a Pre-Construction Notification to ensure compliance. Compensatory mitigation may be required if wetland impacts exceed 0.1 acres per crossing or if Regional Conditions apply.
Erosion Control and Stormwater	Louisiana Department of Environmental Quality	Stormwater Pollution Prevention Plan will support earth disturbance and construction activities pursuant to National Pollutant Discharge Elimination System (NPDES) requirements.
Phase I ESA	U.S. Environmental Protection Agency	Pursuant to Superfund Act and Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

Permitting Strategy (cont.)

Permit or Action Name	Organization or Agency	Activity
Highway Crossing Permits	Louisiana Department of Transportation; Parish Police Jury	Overhead transmission crossing permits will be needed for transmission line crossings over state and parish roads.
Pipeline Easements / Crossing Consent	Various pipeline operators	Title policy requires crossing consent agreement for pipeline easements impacted/crossed by solar and transmission line.
Miscellaneous Utility Crossing Consent	Electric cooperatives, water companies, drainage districts, etc.	Title policy requires crossing consent for various easements impacted/crossed by a solar and transmission line

Key Risks & Concerns

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Key Risks & Concerns

- Does LSbp serve as developer? Does LSbp operate? Does bp operate?
  - Bp retains full optionality if Direct Pay legislation gets approved
- Evaluate options around tax equity treatment
  - Work with bp Treasury on project financing options
- How much “head room” does bp have for investment tax credits?
- Existing Oil & Gas Leases
  - Should bpx send notices re: production/audit/PPQ
- Timber Inventory Options
  - Full scope, partial scope, or delay to 2022
- Timber Management, post-expiration
- Confidentiality Agreements and Sharing of information with LSbp
- Other items?

Next Steps and Wrap Up

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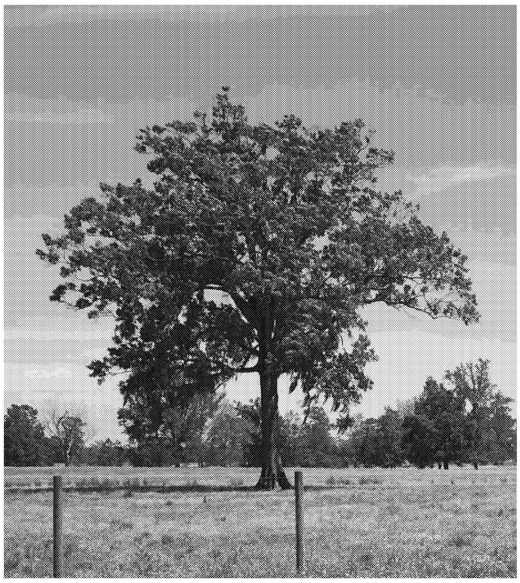
Next Steps

- Initial ownership structure
- Internal bp approvals and funding
- Key internal stakeholders
- Electricity/Products marketing and sales
- Future technologies screening and decisioning

Next Steps and Wrap up

Thank you for participating!



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Similar Solar Project: EVRAZ 300 MW Solar Farm

Near Completion – Pueblo, Colorado

~2500 acre footprint

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Timber Pricing Perspective from Hancock Timber

- The reason for the run-up in lumber prices is mostly due to supply and demand issues.
  - Limited inventories because of mill curtailments and supply chain disruptions in 2020, coupled with robust demand for home renovations and new home construction fueled the imbalance which the producers have yet to catch up to.
  - That said, at historic profit levels for many of the lumber producers they are not overly motivated to ramp up production by adding more shifts and pushing volume into the market.
- It is [Hancock's] position that this extreme situation will not last, and some value will flow back to the log owner but that has yet to happen.
  - [Hancock] believe[s] this dynamic will change and when it does, [Hancock] will be poised to sell more volume into the SW Louisiana market and other regions as well (i.e., this is not a localized issue for [Hancock]).