



Hopkins Energy Virtual Town Hall

Shaping the transition to a carbon-neutral economy

March 22, 2021



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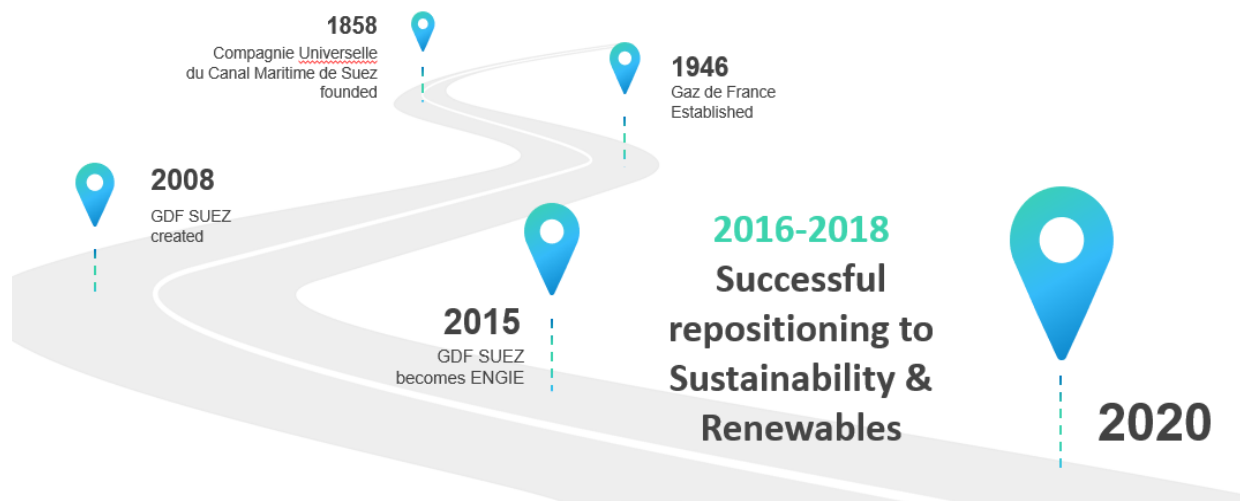


Who We Are

ENGIE's Stable 150-Year Journey

- ENGIE is a global electric company that offers a range of energy services – such as low- or carbon-free electricity generation and distribution, retail energy sales, energy efficiency, and sustainable energy solutions.
- As a leading global energy company, ENGIE has always forged a path towards a better future, from the Suez Canal to Renewable Energy.

150 YEARS AS PIONEERS: CUSTOMER RELATIONSHIPS AND ENERGY INFRASTRUCTURES ARE IN OUR DNA



ENGIE's North American Presence

- Headquartered in Houston, Texas
- Active in North America for over 40 years
- Almost 3,000 MW of installed renewable energy, including 1,366 MW in Texas
- Top 3 largest commercial electricity supplier in North America
 - Key Texas Customers
 - Boeing
 - Starbucks
 - Nestle
 - USPS



Hopkins Energy Development Team



Ryan Economy
Development Sr. Manager



Randall Rayford
Development Manager



Drew Wiley
Construction Manager



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What is a Solar Farm?

Photovoltaic vs. Concentrated Solar



ENGIE Projects

Arid Desert – Brewster County, Texas



ENGIE Projects

Farmland – New Lisbon, Wisconsin



ENGIE Projects

Cattle Pasture – France



Nearby Solar Projects

6790 FM 1503, Deport, Texas



Nearby Solar Projects

6790 FM 1503, Deport, Texas





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Economic & Community Benefits

Community Benefits

Just as we partner with our customers, we partner with local communities and stakeholders

Community Benefits	Hopkins Energy
Tax Revenue (over lifetime of project)	<ul style="list-style-type: none"> • \$20 million in school district tax • \$8.7 million in county tax revenue • \$3.4 million in hospital district revenue • \$3.3 million in additional real estate tax revenue • \$3 million in 2023 tax revenue • <u>Est. total local tax revenue of \$35 million</u>
Job Creation	<ul style="list-style-type: none"> • Up to 400 jobs during construction generating >\$20 million of wages within TX • Up to \$75 million in indirect and induced wages within TX • 3 - 4 permanent jobs
Community Support	<ul style="list-style-type: none"> • Over \$750,000 in charitable contributions to community causes over the project lifetime
Local Services	<ul style="list-style-type: none"> • Very minimal use of county infrastructure and services during 35-year project life



In Dec 2019, ENGIE employees donated and volunteered to sort, wrap, and distributed Christmas dinners for over 150 families and toys for over 300 local children in Andrews, Texas near our Jumbo Hill wind project.

*All data presented here is indicative and a projection of potential benefits and payments

Local Economic Opportunities

Local Jobs & Contracting

Job Opportunities

- Local job fair and online job postings

Service Opportunities

- Numerous opportunities for local catering, event, lodging, and other local businesses





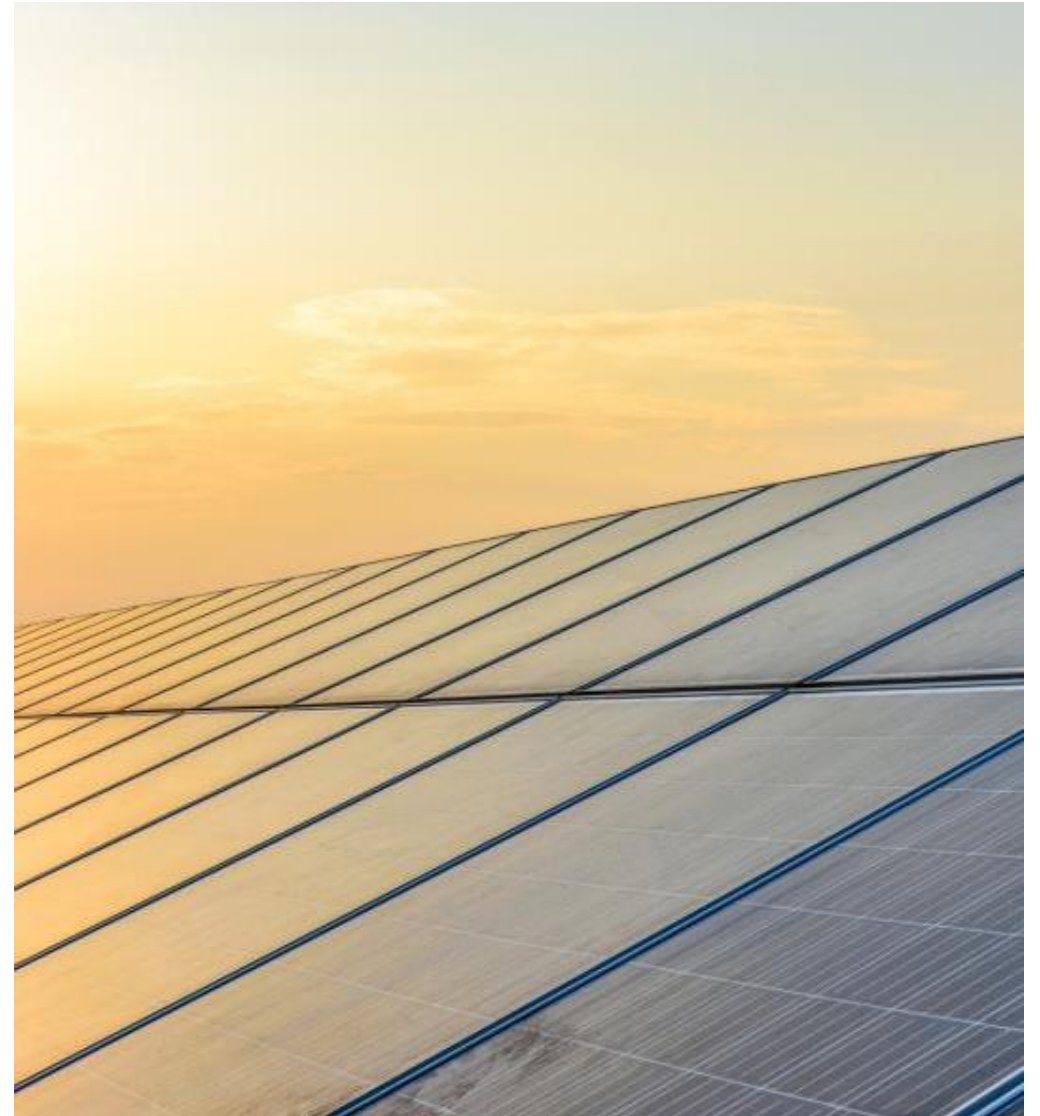
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Project Overview & History

Hopkins Project Overview

Key Facts

- 250 MW solar photovoltaic system
- Connecting to the Texas power grid (ERCOT)
- Start of construction in Sept. 2021
- Commissioning in Dec. 2022
- Expected electricity production of 653,950 MWh in 1st year
 - Enough to power approx. 78,282 homes or equivalent to over 1 million barrels of oil
 - Estimated emissions reduction of 509,674 tons of CO₂



*Estimates generated from EPA Greenhouse Gas Equivalencies Calculator

Hopkins Energy

Low Impact Project Design

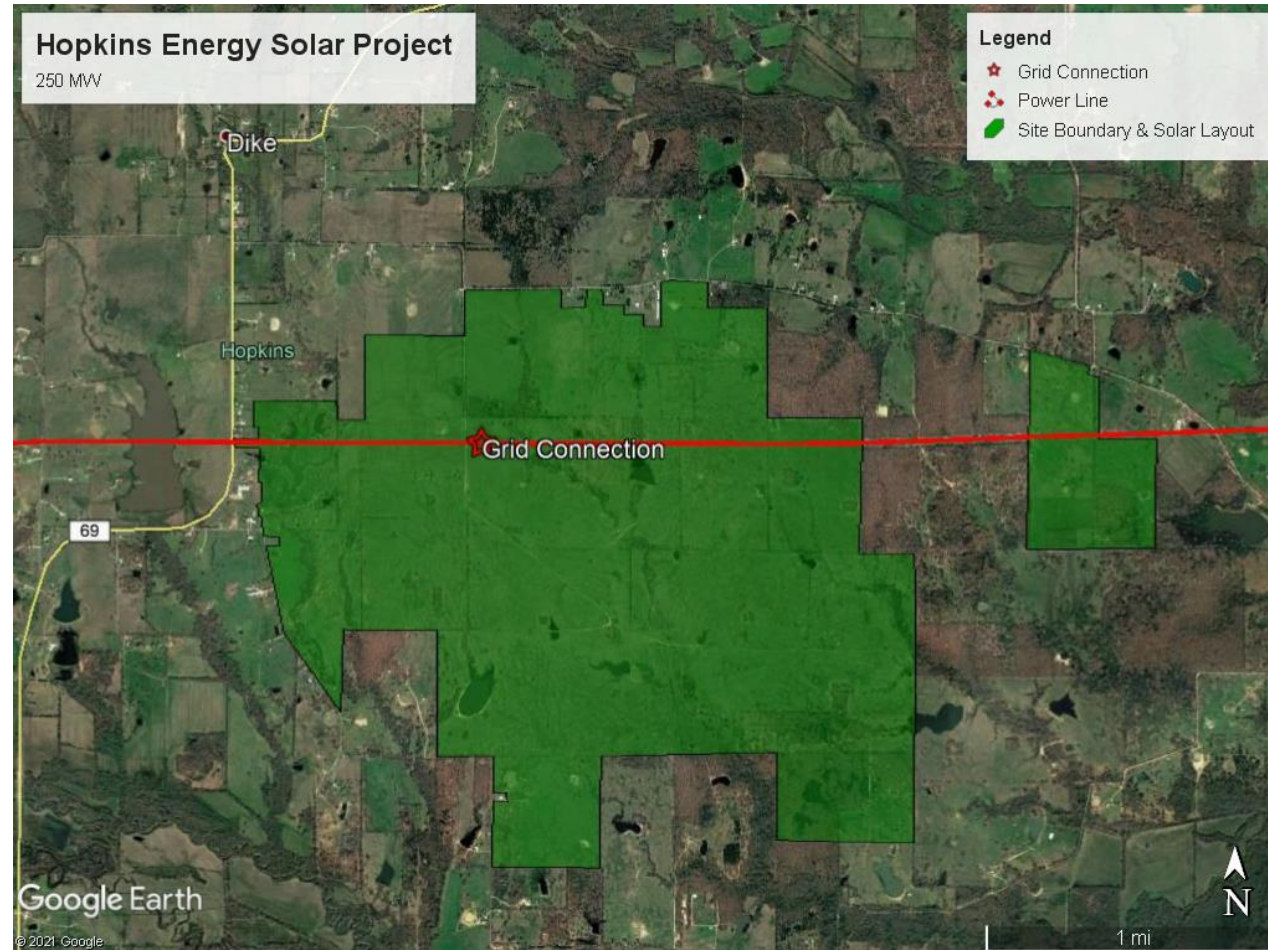
- Approx. 1,850 acres of cattle pasture with minimal tree clearing necessary (~5% of the site)

- Key Equipment
 - › Nearly 647,000 crystalline silicon solar panels (no Cadmium Telluride panels will be installed)
 - › ~76 inverters to convert electricity from direct current to alternating current
 - › Transformers to increase voltage to grid power

- New Infrastructure
 - › New utility company substation
 - › On-site operations & maintenance building
 - › Access roads within leased project area
 - › Security and safety fencing
 - › Landscaping to decrease project's profile

Hopkins Interconnection Location

Centrally located to ensure minimal disturbances to next-door neighbors



Hopkins Project Development Timeline



● Start of development

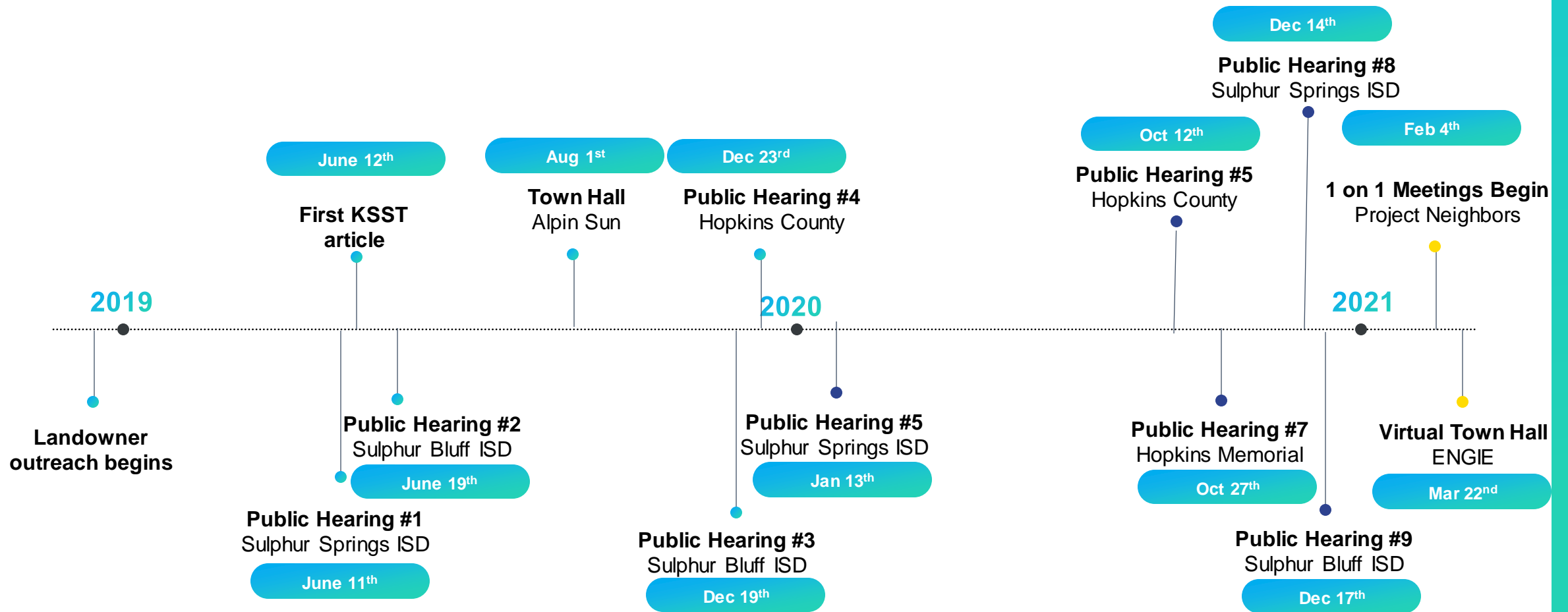
● Development continues

● Development continues
● ENGIE acquires the project

● Development complete
● Full design & engineering
● Start construction in Sept.

● Commissioning in Dec.
● 35-year operating life
● Decommissioning and removal in 6 – 12 months

Public Outreach Timeline



Local Media Coverage

- KSST Radio
 - 18 stories published since June 2019
- Sulphur Springs News-Telegram
 - 10+ stories published since June 2019



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Environmental Due Diligence

Completed Environmental Studies

Our environmental studies & surveys go above what is required by the state and ensure minimal impact on the project landscape

Existing Conditions

- Phase 1 Environmental Assessment
- Topographic Survey
- Preliminary Geotechnical Investigation

Land

Assessment of the current state of the land and identification of any pre-existing environmental concerns

Biological & Cultural Resources

- Biological Resources Assessment
- Cultural Resources Assessment

Resources

Assessment of potential for occurrence of natural and cultural resources

Wetlands & Hydrology

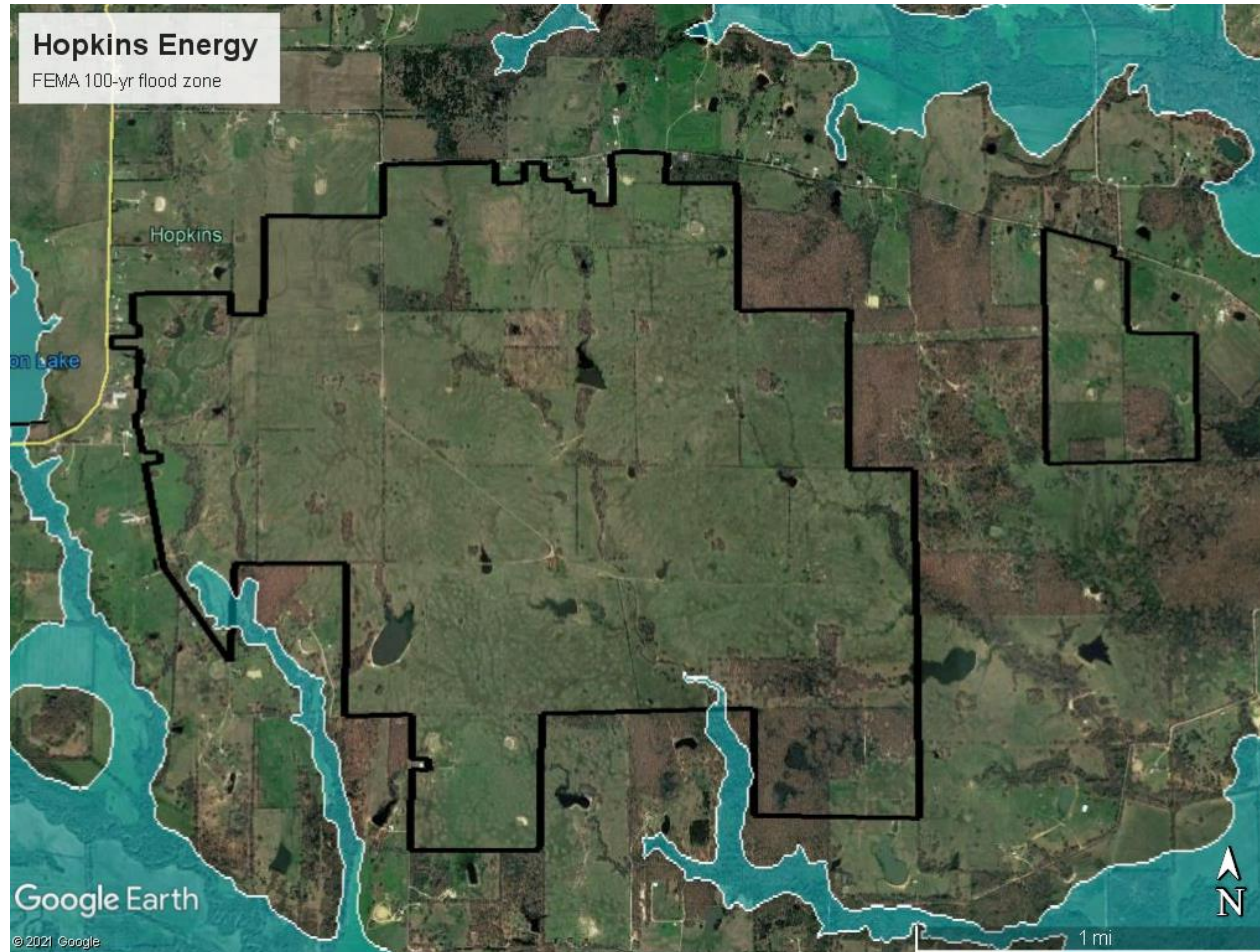
- Wetlands Delineation

Water

Delineation of all water features and federally regulated waterways

FEMA Flood Zone Avoidance

No project components will be located within FEMA's 100-year flood zone



Pending Environmental Studies

These studies & surveys are completed in preparation ahead of the start of construction

Hydrology Study

- Identify flood plains, water flow/run-off patterns

Nesting Bird Survey

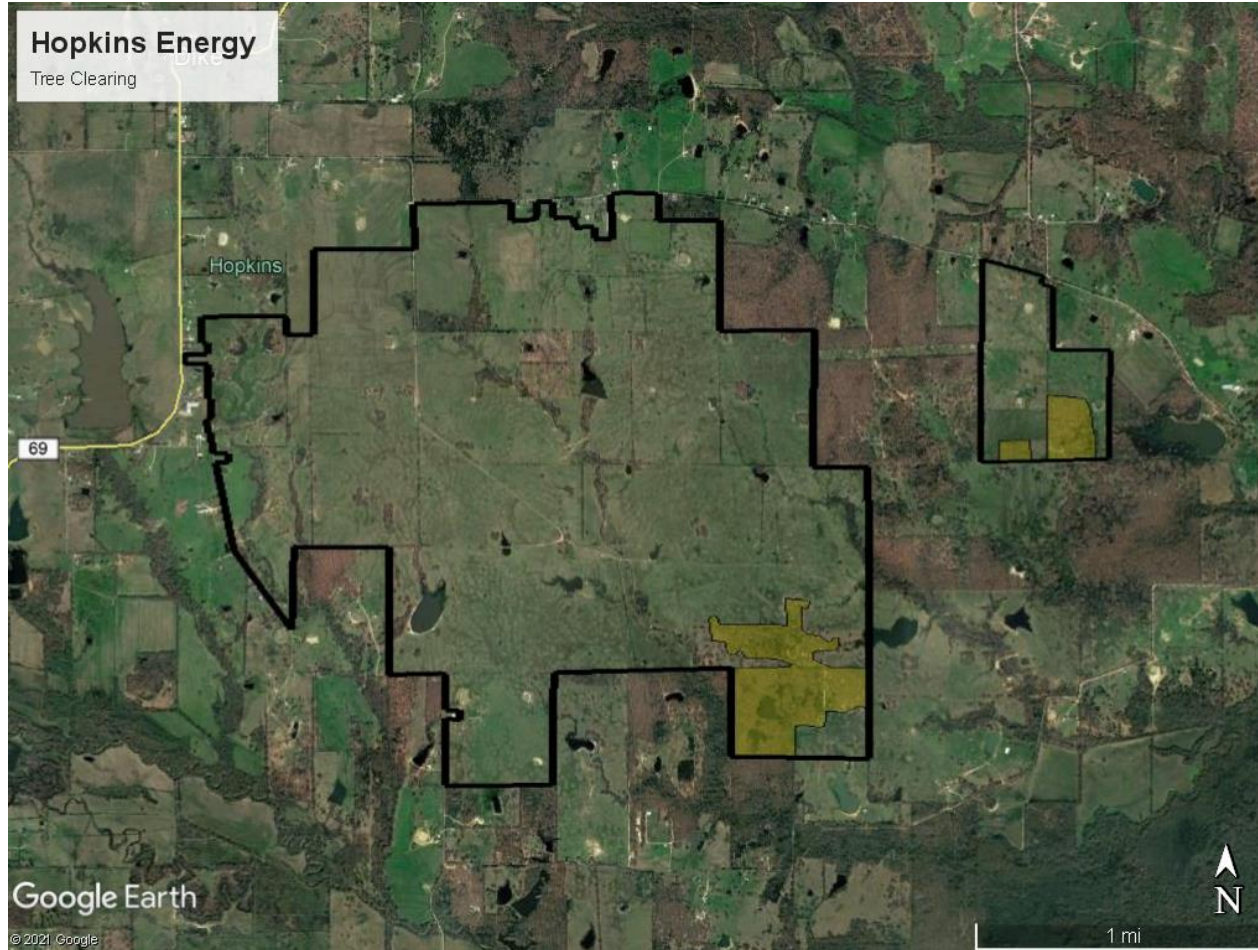
- Locate any pre-existing nest sites and species (e.g. eagles, raptors, etc.)

Geotechnical Investigation

- Assess soil conditions and solar racking requirements

Tree Clearing

Approx. 120 acres, less than 6.5% of the project site



Stormwater & Erosion Control

- All project equipment will be located outside of the FEMA 100-year flood zone
- Hydrology study is underway
- Designed in accordance with the requirements of the Texas Pollutant Discharge Elimination System (TPDES)
 - Regulates stormwater, run-off, erosion control measures, and control of discharges of pollutants to surface waters
 - Development of Stormwater Pollution & Prevention Plan to be completed based on hydrology study results
 - No concrete structures will be installed to divert stormwater
 - Texas Stormwater General Permit for Construction Activities required prior to start of construction

Post-Construction Restoration

ENGIE has been recognized as a national leader in pollinator-friendly solar project design

- TCEQ General Permit
 - Requires re-seeding with vegetative cover with a density of at least 70% of the native background vegetative cover
 - Project will work with local vendors to ensure seed mix reflects existing conditions
- Additional re-seeding of approx. 150 acres of pollinator-friendly vegetative species
- Benefits
 - Enhance locally beneficial vegetation
 - Provide food and habitat to wildlife
 - Slow stormwater runoff and protect against erosion
- Roads impacted during construction will be documented and returned to their original state at no cost to the County or local citizens in excess of the \$144,000 one-time project road payment



Minimizing Environmental Impact

- Panels are 8 feet high when at full rotation
- Designed to absorb light, not reflect it
- This is not a concentrated solar tower facility
 - No mirrors
 - No beams
 - No scorched birds
- FAA Determination of No Hazard received



Quiet Operations

- Inverters
 - › Nearly inaudible from the property and fence line
 - 49.5 dB at 100 feet away (moderate rainfall)
 - 35.6 dB at 500 feet away (whisper or library)

- Substation
 - › Approx. 1,880 feet from nearest property line
 - › Approx. 2,700 feet from any neighboring houses

LEVELS OF NOISE In decibels (dB)

PAINFUL & DANGEROUS		
Use hearing protection or avoid	140	<ul style="list-style-type: none"> - Fireworks - Gun shots - Custom car stereos (at full volume)
	130	<ul style="list-style-type: none"> - Jackhammers - Ambulances
UNCOMFORTABLE		
Dangerous over 30 seconds	120	<ul style="list-style-type: none"> - Jet planes (during take off)
VERY LOUD		
Dangerous over 30 minutes	110	<ul style="list-style-type: none"> - Concerts (any genre of music) - Car horns - Sporting events
	100	<ul style="list-style-type: none"> - Snowmobiles - MP3 players (at full volume)
	90	<ul style="list-style-type: none"> - Lawnmowers - Power tools - Blenders - Hair dryers
Over 85 dB for extended periods can cause permanent hearing loss.		
LOUD		
	80	<ul style="list-style-type: none"> - Alarm clocks
	70	<ul style="list-style-type: none"> - Traffic - Vacuums
MODERATE		
	60	<ul style="list-style-type: none"> - Normal conversation - Dishwashers
	50	<ul style="list-style-type: none"> - Moderate rainfall
SOFT		
	40	<ul style="list-style-type: none"> - Quiet library
	30	<ul style="list-style-type: none"> - Whisper
FAINT		
	20	<ul style="list-style-type: none"> - Leaves rustling

*Source: American Academy of Audiology (www.audiology.org)

Quiet Operations



Visual Impact

Digital Rendering – 6015 CR 3520 looking south

Screening vegetation will ensure low profile



Visual Impact

Digital Rendering – CR 3523 at ETP Pipeline looking south



Visual Impact

Digital Rendering – Along CR 3523 looking south



Hopkins Energy

Digital Rendering – Along CR 3520





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Solar Panel Health & Safety

Health and Safety Impacts of Solar

Solar Panel Health & Safety Considerations

- The project will not use Cadmium Telluride panels
- Crystalline silicon panels selected
 - Deployed worldwide for over 30 years
- Primary components
 - Silicon
 - Aluminum
 - Glass
- Do not pose a material threat to the public health and safety
 - Potential for leaching into water sources has been studied and does not pose a significant threat
- Designed to withstand a direct hit from golf ball-sized hail and even larger when stowed
- Fully insured for rapid repair and replacement in case of severe weather or natural disaster

ENGIE's Commitment to Recycling/Restoration

ENGIE is committed to being a good neighbor in the long run

- ENGIE goes above and beyond what is required by US regulations in recycling/donating the facility's components at the end of the project life
- ENGIE has a successful track record with multiple recycling contractors throughout the state and nation
- ENGIE is obligated to pay for the removal of all project components and restore the land as close as possible to its current condition



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Feb. 2021 ERCOT Blackout

ERCOT Feb. 2021 Blackout

Power Plant Outages

Gas, coal, and nuclear had largest outages

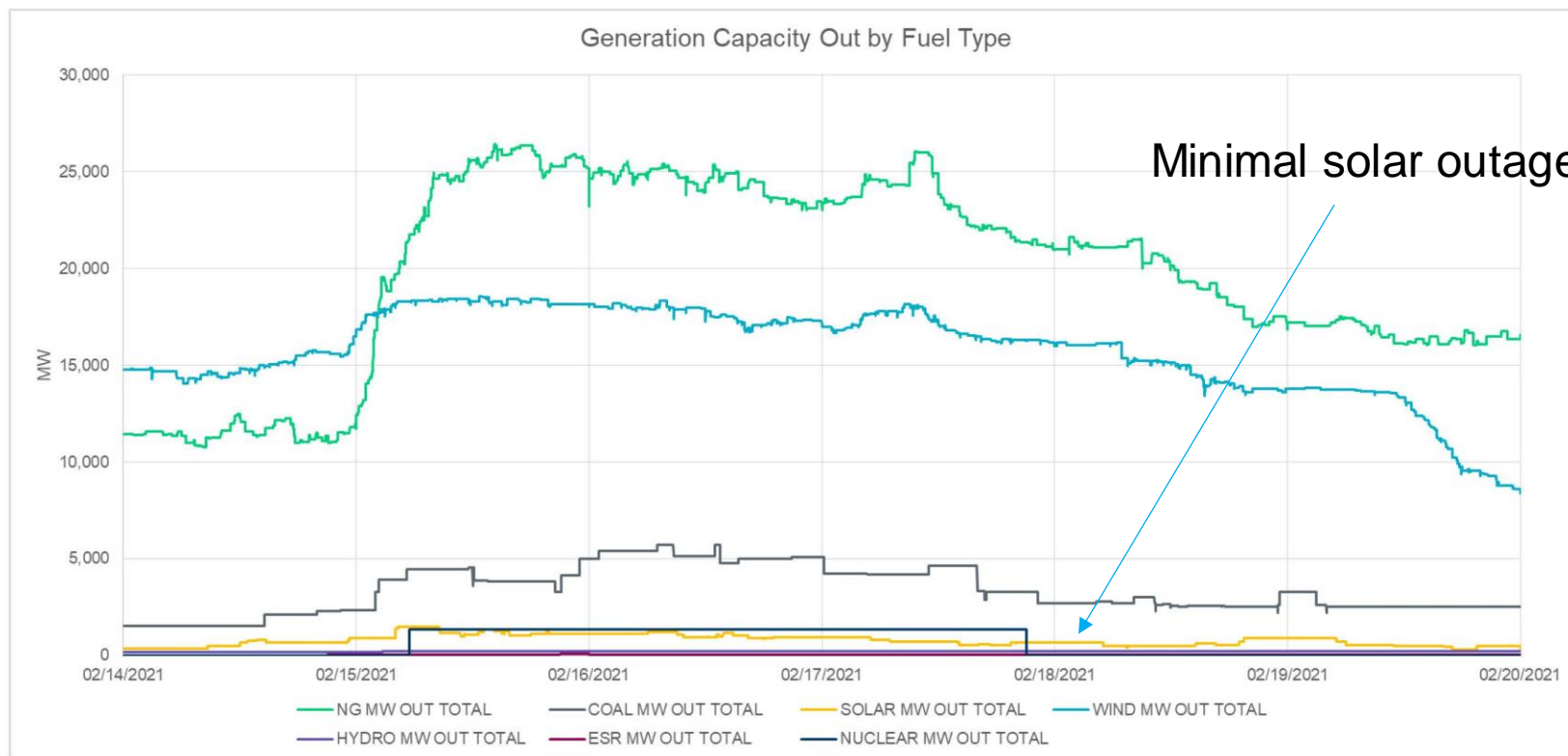
- Approx. 30,000 MW of fossil fuel plants and nuclear
- Nearly than 26,000 MW of natural gas plant outages
- Solar performed as expected for that period of the winter season



February 2021 Winter Storm

ERCOT – Reported Outages

Generation Capacity Out by Fuel Type



Minimal solar outages in yellow



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Q&A

THANKS!



[engie.com](https://www.engie.com)