



# ***SOLAR + STORAGE***

*INTRODUCTION BY:*

**Paula Gold-Williams**

President & Chief Executive Officer (CEO)

*PRESENTED BY:*

**David Jungman**

Sr. Director, Business & Economic Development

June 25, 2018

*Approval Requested*

# AGENDA



- **PARTNER W/SOUTHWEST RESEARCH INSTITUTE (SWRI)**
- **ENERGY STORAGE: NOT IF, BUT WHEN**
- **PROJECT DEVELOPMENT TIMELINE**
- **SOLAR+STORAGE PROJECT**
- **NEW TECHNOLOGY IMPLEMENTATION GRANT (NTIG)**
- **PROCUREMENT**
- **RECOMMENDATION**

# PARTNER WITH SwRI



SOUTHWEST RESEARCH INSTITUTE



- **BENEFITS:**

- SwRI - research on project
- CPS Energy – renewable energy, reduced emissions, operational experience
- Both parties – community recognition, data sharing

- **AGREEMENTS:**

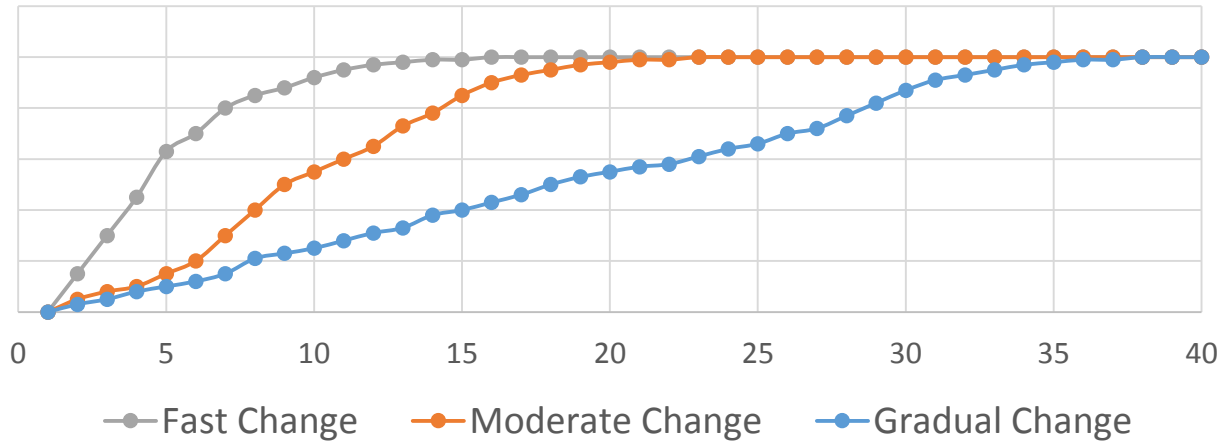
- Land lease (solar)
- Warehouse lease (storage & educational)

# ENERGY STORAGE

## Not If, But When



Illustrative Technology Adoption Curves



Investing our efforts in technology now:

- proactively readies us for change
- supports Flexible Path strategy
- benefits our customers and community

# PROJECT DEVELOPMENT TIMELINE



**2015**

- Hired energy storage consultant
- Completed energy storage feasibility study

**2016**

- Applied for and awarded NTIG by the TCEQ<sup>1</sup>
- Partnering discussions with SwRI
- Drafted Request for Proposal (RFP)

**2017**

- Issued RFP and evaluated proposals
- Negotiated lease agreements with SwRI

**2018**

- Negotiated agreements with project developer
- **Board Approval Requested**
- Begin Installation

**2019**

- Complete Installation
- Commercial Operation

<sup>1</sup> Texas Commission on Environmental Quality

# SOLAR+STORAGE PROJECT



**5 MW AC Solar PV Facility**



**10 MW Battery Storage System**

- Energy Storage System (ESS) co-located with solar production
- Application: Solar shifting and Fast Responding Regulation Service (FRRS)
- Flexible configuration
  - 10 MW FRRS with 1 hour duration
  - 5 MW stored energy with 2 hour duration

**Contract Price = \$16.3 M**

# NEW TECHNOLOGY IMPLEMENTATION GRANT (NTIG)



**\$3 million**

*Funding awarded to  
CPS Energy by*



TEXAS COMMISSION  
ON ENVIRONMENTAL QUALITY

*and*



- Improve the quality of air in Texas
- Facilitate the implementation of new technologies to reduce emissions
- Fund implementation of new technologies while creating new business and industry

**CPS Energy was awarded \$3M to partially  
offset the ESS cost**

# LOCATION AT SwRI



- A. Solar Farm
- B. ESS & Educational area



Solar + Storage Site at SwRI (9800 West Commerce)

**Highly visible site located along the Highway 151 corridor**



# ESS & EDUCATIONAL AREA



# PROCUREMENT



- Issued RFP for engineering, procurement & construction (EPC) contractor
- Received & evaluated 22 proposals

# EPC CONTRACTOR



- Selected RES Americas (RES)
- Negotiated two agreements:
  - EPC Agreement (solar)
  - Turnkey Equipment Purchase & Installation Agreement (storage)

**RES' proposal exhibited the best combination of value, technology & financial ability.**

# PROJECT SUPPORT



Collaborative effort by CPS Energy staff & legal/consulting firms on:

- Development of the RFP
- Grant application
- Procurement
- Contracts and agreements

# REQUEST



Authorize the CEO to execute agreements with RES up to the combined amount of \$16.3M that will:

- Combine renewable energy with new technology benefits
- Reduce emissions & improve the quality of air
- Promote a local yet global partnership with SwRI
- Lower technology costs
- Support ***Flexible Path*** strategy

**Your approval is requested for the project as presented**



***Thank You***