PLUMMETING SOLAR, WIND, AND BATTERY COSTS CAN ACCELERATE OUR CLEAN ELECTRICITY FUTURE
WHY 90% CLEAN BY 2035?

- The electric sector is a major contributor to greenhouse gas emissions (GHG) –
  - cuts to climate pollution from electric power by 2035 is a critical step needed to cut economy-wide emissions
- Low-cost reductions in GHG emissions must be pursued soon to avoid worst climate change impacts
  - Renewables and storage are now less expensive than fossil power
- This is the first study to show that wind, solar and storage and can deliver massive emission reductions w/o increasing consumer costs
- The build out of renewables and storage envisioned is aggressive but feasible
- Economic, health and climate benefits of a 90% clean generation sector are massive and could significantly contribute to COVID-19 economic recovery
DRAMATIC COST DECLINES ARRIVED SOONER THAN ANTICIPATED
STRONG POLICIES REQUIRED FOR A 90% CLEAN GRID BY 2035

ANNUAL GENERATION | 90% CLEAN

ANNUAL GENERATION | NO NEW POLICY
DEPENDABLE WITHOUT COAL OR NEW GAS

HOURLY DISPATCH DURING THE MAX GAS GENERATION WEEK

- LOAD
- SOLAR
- WIND
- BATTERY DISCHARGE
- HYDRO
- GAS
- NUCLEAR
- BATTERY LOAD
- PUMPED-HYDRO LOAD

HOURLY GENERATION (GW)

29/JULY  30/JULY  31/JUL  1/AUG  2/AUG  3/AUG  4/AUG
ELECTRICITY COSTS LOWER THAN TODAY

- NO NEW POLICY W/ ENV COST
- 90% CLEAN W/ ENV COST

- NO NEW POLICY W/O ENV COST
- 90% CLEAN W/O ENV COST

$/MWh (2018 REAL)

2020 2025 2030 2035
AVOIDS $1.2T IN HEALTH AND ENVIRONMENTAL DAMAGES
SCALING UP RENEWABLES IS FEASIBLE

CUMULATIVE NEW CAPACITY ADDITIONS

- Battery Storage
- Solar
- Wind

NEW CAPACITY (GW)

- 2020
- 2025
- 2030
- 2035
SIGNIFICANTLY INCREASES ENERGY SECTOR EMPLOYMENT

CUMULATIVE JOB YEARS (‘000), 90% CLEAN COMPARED TO NO NEW POLICY

Supports 500,000 more jobs each year through 2035 than business as usual
CLEAN ELECTRICITY IS THE ROAD TO RECOVERY

Economic recovery opportunity

Jobs and infrastructure

No increased costs for customers
INVESTMENT AND TAX CREDITS ALONE WILL NOT GET THERE

Adopt a national clean energy standard of:

- 55% by 2025
- 75% by 2030
- 90% by 2035
- 100% by 2045
ADDITIONAL POLICY LEVERS NEEDED

- Reinstate the advanced manufacturing tax credit from the American Recovery and Reinvestment Act to support domestic manufacturing.
- Offer federal debt financing for utilities.
- Shore up worker pension and healthcare funding and support communities through the coal transition.
- Work with DOE, DOI, FERC, and states to expand and improve supporting programs.
QUESTIONS?