COAL PLANT DECOMMISSION, DECONTAMINATION AND DEMOLITION

PREPARED FOR: A&WMA

NOVEMBER 18, 2020





INTRODUCTIONS

MEGA SYMPOSIUM: NAVIGATING THE EMERGING ENERGY (VIRTUAL) ENVIRONMENT



JASON GOLDBERG VICE PRESIDENT



NICHOLAS KEMPER

BUSINESS DEVELOPMENT MANAGER BROWNFIELD REDEVELOPMENT GM



TRUST THE PROCESS

THIS STRATEGY HAS PROVEN:



ENVIRONMENTALLY FRIENDLY

EFFECTIVE



EFFICIENT

ECONOMICAL

CORE SERVICES OVERVIEW

FE GROUP DEMO

DEMO & DECOMMISIONING

- Universal Waste & Asbestos Management
- Equipment Dismantling
- Selective Structural Demolition
- Complete Structure
 Demolition
- Underground Piping & UST Removal
- Investment, Asset Recovery, Scrap Recycling – End Users
- Concrete Demolition & Crushing
- Complete Site Restoration
- Land Re-Purpose & Reutilization

INDUSTRIAL SERVICES

INDUSTRIAL SERVICES

- Site Development, Excavation & Grading
- Soil Remediation
- Soil Mixing & Stabilization
- Landfill Capping & New Construction
- CCR, Ash Management
- MGP Sites
- Industrial Cleaning

CAMS SERVICES

ENERGY ASSET MANAGEMENT & O&M

- Power Generation
- Thermal & Renewable
- Midstream
- E&P
- Infrastructure
- "Cradle to Grave Services"
- Due Diligence
- Pre-COD & Transition Services
- Asset Management
- O&M
- Financial Services
- Environmental Services
- Deconstruction & Remediation Oversight
- Brownfield Redevelopment

US COAL RETIREMENTS

2-10 YEAR: SINCE 2005 THE US HAS REDUCED ITS CARBON EMISSIONS BY 2.4B METRIC TONS OF CO₂



Image produced by Carbon Brief

Closed/closing in 2-5 years

Operating w/ plan to close in 10 years

- Coal ash remediation. decommissioning & demo \$21B industry
- 8GW retired in 2019; 13.7GW in 2018
- Coal = 68% of power retirements in 2019
- 229GW remaining in the US
- 22% retired coal facilities have added 11,050 MW of solar
- Coal 23.3% power; Nat Gas 38.1
- Despite closures; capacity rose ~9GW from 2017-2018
- Stats provided by the Edison Electric Institute: https://www.eei.org/resourcesandm edia/Pages/IndustryData.aspx

PROPER DECOMMISSIONING & DEMO PHASES

FOUR KEY PHASES REQUIRED



I. PRE-PLANNING (RISK ASSESSMENT)

II. PROJECT DEVELOPMENT

III. PROJECT EXECUTION

IV. PROJECT CLOSEOUT

REDEVELOPMENT PHASES

KEY PHASES REQUIRED BY BROWNFIELD REDEVELOPMENT

PHASE I

DETERMINE MARKET OF PROPERTY

PHASE II

APPLICATION SUBMISSION & ISO DESIGN

PHASE III

FEASIBILITY STUDY

PHASE IV

ISA NEGOTIATION

PHASE V

CONSTRUCTION & COD

KANSAS COAL PLANT

POWER FACILITY DECOMMISSION & DEMOLITION



AST and UST bulk fuel oil removal



Low-rise structure & equipment removal for clear plant access

Crush & demolish concrete spec for backfill, site stabilization



Ferrous and Non-Ferrous Metal preparation with 98% recycled materials

NEVADA PEAKING STATION





252 MW Natural Gas Fired Turbine Units

Determine best property outcome

Demolish & remediate facility allowing for repower

Recycled Ferrous and Non-Ferrous and precious metals

Demolition planning critical to meeting schedule

Strategies evolved as changes in conditions arose in field

Closed land sale for renewable power development

Community happy with offset of carbon emissions

PENNSYLVANIA COAL PLANT POWER FACILITY DECOMMISSION & DEMOLITION

EXISTING TRANSFORMERS

LEASED LAND SECTION & PROPOSED REG D SITE



EXISTING 115 KV LINE UP TO 90 MW

PHASE 2 SOLAR EXPANSION ~ 10 MW

10

QUESTIONS?

Nicholas Kemper

713.358.9736 nkemper@camstex.com Jason Goldberg

832.808.6006 jgoldberg@fegrp.com



Consolidated Asset Management Services

Fe Group, LLC