



NEW JERSEY DEPARTMENT OF LABOR & WORKFORCE DEVELOPMENT



**Workforce Development
Programs and Support Services**



TRAINING & SUPPORT

New Jersey Department of Labor and Workforce Development (NJ LWD) offers business services and has many training incentives available to ensure employers continuously have access to an up-to-date skilled and educated workforce. This includes:

- **Assistance to New Jersey businesses and residents** with meeting their training necessities.
- Proactively **work with businesses in New Jersey** to address the skill gaps, needed credentials, and educational attainment for new hires and/or existing employees.
- Provide financial **support for needed training**.

Note: New training opportunities are updated on LWD's website at: <https://www.nj.gov/labor/> throughout the year.



ACCESS TO A TARGETED WORKFORCE

NJLWD has been conducting occupational analysis of the skills and educational attainment needed for this project. It serves as a snapshot of the Garden State's employment resource availability for the project's lifecycle.

- 1) **Planning & Development (Phase I)**: Will require workers with specialized skills and knowledge to evaluate and assess the project's specific needs and requirements, as well as design the road map to execute and guide the project to a successful outcome. (*Includes: Engineers, Surveyor & Scientific Monitoring, Legal & Regulatory professionals, Marketers, etc.*)
- 2) **Construction (Phase II)**: Will require workers with skills in specialized craftsmanship from setting up a site (such as removing existing impediments) to preparing it for development (such as grading and laying down a road system for accessing supplies, workers, etc.) to the installation and construction of the facilities and its support system for the operation to function. (*Includes: Project Engineers, Construction Managers, Trade Workers, etc.*)
- 3) **Operation & Maintenance (Phase III)**: Will require workers with the skill set necessary to have the facility operate efficiently and effectively. (*Includes: various types of Technicians - such as Wind Turbine Technicians, Trade Workers, Water Transportation related workers, Site/Plant Managers, etc.*)



Applicable Programs & Services to Address Employment Training Include....

<u>Skills Grants</u>	<u>On-the-Job Training</u>
<ul style="list-style-type: none">• Incumbent worker training• 50 – 50 cost share reimbursement based program• Focused on group Classroom training by 3rd party or In-house expert	<ul style="list-style-type: none">• 50% wage reimbursement for individual trainee• Streamlined contract process• Up to a max of 6-month in-house training program
<u>Opportunity Grants</u>	<u>One-Stop Services</u>
<ul style="list-style-type: none">• Industry-specific training• Work based learning• Pre-apprenticeship training• Vocational training	<ul style="list-style-type: none">• Job Fairs• Recruitments/Open Houses• Federal Bonding• WOTC
NJ Builders Utilization Initiative for Labor Diversity (NJBUILD)	Growing Apprenticeships in Nontraditional Sectors (GAINS)
<ul style="list-style-type: none">• Training for Women & Minorities in Trades• Providing pre-apprenticeship training• Basic skills instruction & Workforce readiness (employability skills)	<ul style="list-style-type: none">• Establish and expand registered apprenticeship in non-traditional sectors (clean energy, IT, STEM)• Provides grant funding for RA program development and/or expansion• Provides 50% wage reimbursement for hiring apprentices
Industry Partnerships	
<ul style="list-style-type: none">• Industry partnerships is an employer driven system that is designed to help businesses solve their issues, both short and long term.	<ul style="list-style-type: none">• Industry partnerships identify common issues, challenges and opportunities in business sectors.• Businesses that join industry partnerships will have access to training dollars to address their most critical needs.



NJ Apprenticeship Network

- Promote economic growth by preparing New Jersey's workforce for the 21st century economy;
- Establish the NJ Office of Apprenticeship within the Department of Labor and Workforce Development;
- Focus on high-growth sectors such as advanced manufacturing, clean energy and utilities, IT and software, and health care, and creating demand-driven training opportunities;
- Facilitate interactions between businesses, workforce intermediaries, apprentices, educators, and the U.S. Department of Labor;
- Create formal linkages to employers, secondary and higher education systems so that more New Jerseyans receive opportunities in career pathways with upward mobility and sustainable wages;
- Help apprentices earn college credits, access robust career counseling for middle and high school students, and increase diversity and inclusion in apprenticeship programs.



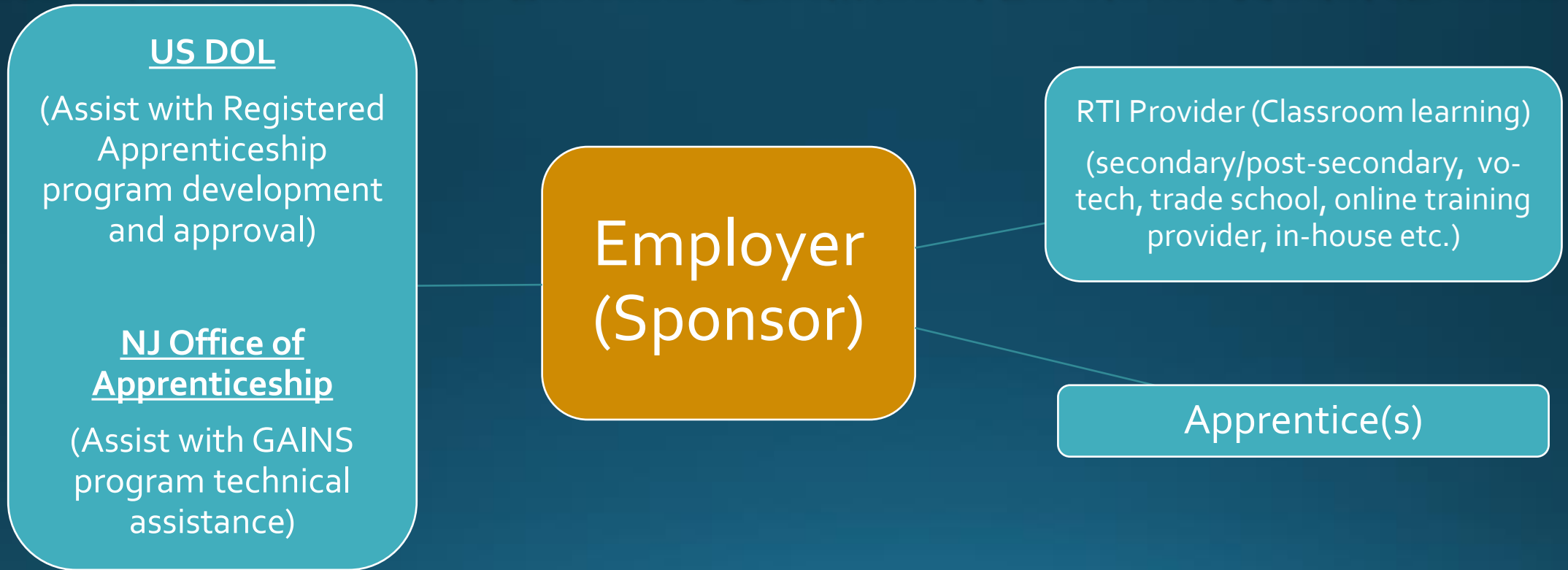
Key Aspects of Registered Apprenticeship Programs



- Three pillars of an RA Program:
 - Related Technical Instruction (RTI), Classroom learning
 - On-the-job Training (Employment)
 - Progressive Compensation Structure (Includes incremental pay increases after program milestones)
- To qualify for GAINS funding, programs **must** be linked to one or more “apprenticeable” occupations. The RA program offers access to over 1,000 career areas, including the following examples:
 - Database Technician
 - IT Generalist
 - Industrial Manufacturing Technician
 - Medical Assistant
 - Pharmacy Technician
 - Carpenter
- Approved by US DOL, Office of Apprenticeship



Registered Apprenticeship Program: Traditional Employer Model (Example)

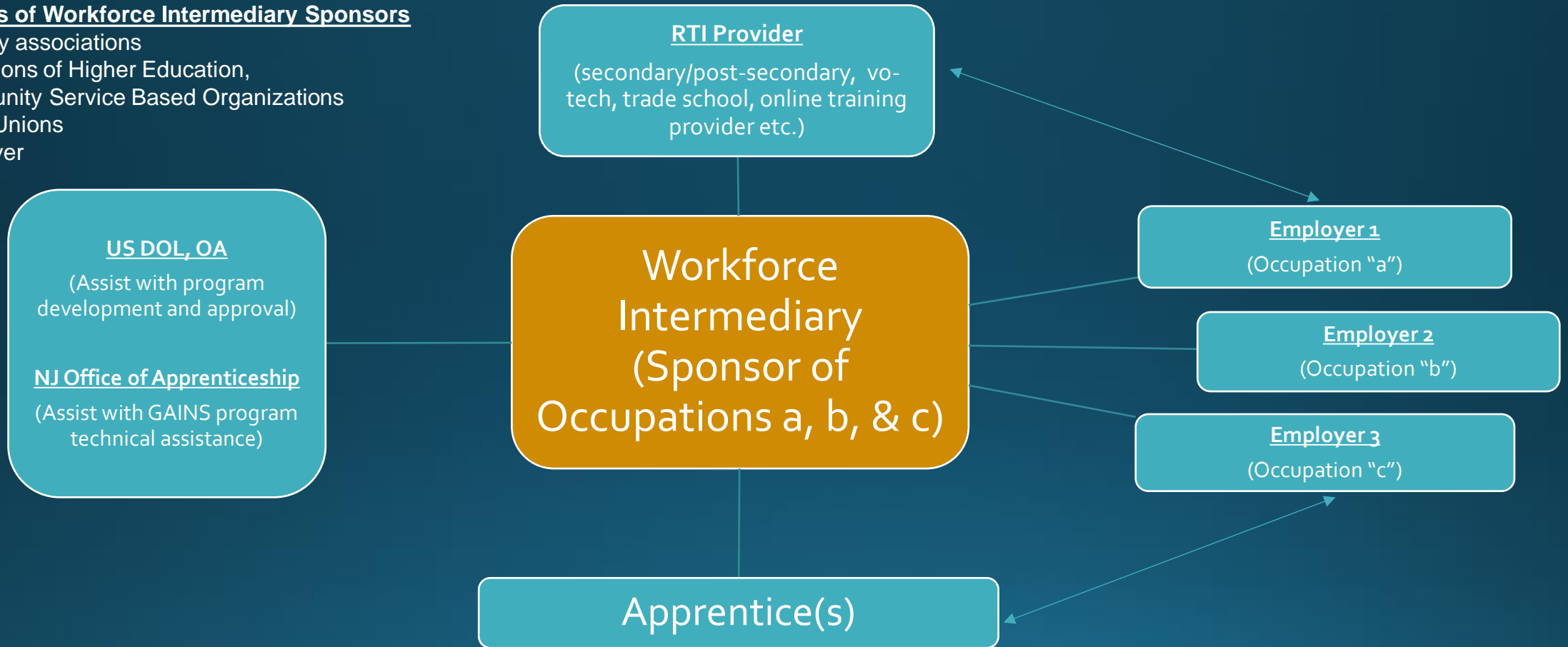




Registered Apprenticeship Program: Workforce Intermediary Model (Example)

Examples of Workforce Intermediary Sponsors

- Industry associations
- Institutions of Higher Education,
- Community Service Based Organizations
- Labor Unions
- Employer



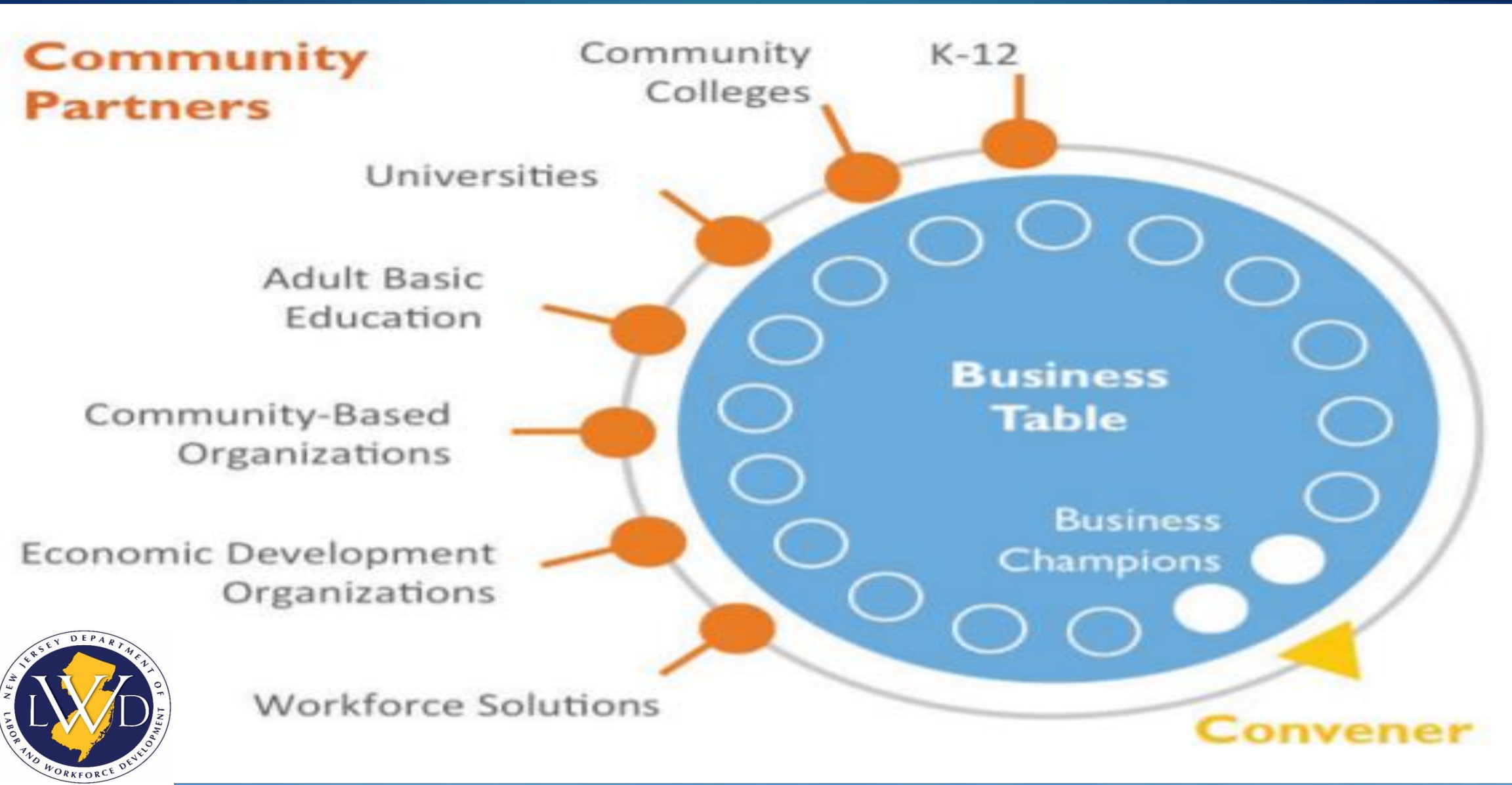


GAINS Funding



- Funding for FY2019 is expected to be \$4.5 million, and is contingent upon availability of funds.
- Successful applicants may be eligible for funding awards up to three years, contingent upon availability of funds.
- For new RA Program Development - Applicants can request assistance with initial and anticipated costs associated with the development of a new RA Program and related technical instruction.
- For new and expanding RA Programs – Applicants can request for reimbursement of up to 50% of the wages (for a maximum of \$80,000 per occupation; capped at \$8,000 per apprentice).

Industry-Driven, Community-Supported Sector Partnerships



INDUSTRY PARTNERSHIPS

- ▶ Industry partnerships is an employer driven system that is designed to help businesses solve their issues, both short and long term.
- ▶ Industry partnerships help businesses maintain their competitive advantage within the industry and the region.
- ▶ Industry partnerships identify common issues, challenges and opportunities in business sectors.
- ▶ Businesses that join industry partnerships will have access to training dollars to address their most critical needs.





CONTACT INFORMATION

New Jersey Department of Labor & Workforce Development

General Workforce Program Information: (609)984-9414

Website: <https://www.nj.gov/labor/index.html> (See Workforce Programs)

Skills Grants

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Opportunity Grants

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On-the-Job Training

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One-Stop Services

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Growing Apprenticeships in Nontraditional Sectors (GAINS)

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NJ Builders Utilization Initiative for Labor Diversity (NJBUILD)

Gerard Balmir

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Industry Partnerships

Kerri Gatling -- 609-984-8190 Kerri.Gatling@dol.nj.gov

OFFSHORE WIND 101

INFRASTRUCTURE AND SUPPLY CHAIN CHALLENGES AND OPPORTUNITIES

PRESENTED TO:
***NJ BPU AND THE OSW SUPPLY CHAIN
NETWORKING EVENT
NOVEMBER 29, 2018***

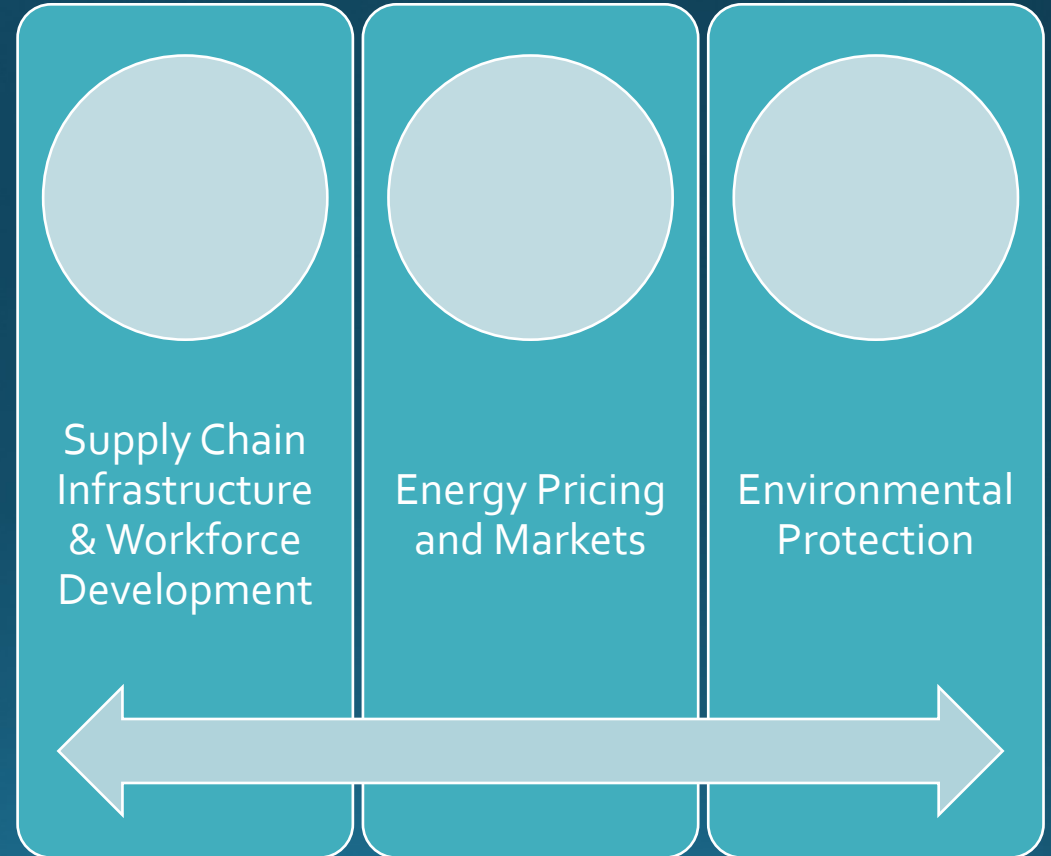
PRESENTED BY:
***RICHARD BALDWIN, PG
RAMBOLL***

RAMBOLL

Three Primary Elements to the NJBPU Offshore Wind Strategic Plan

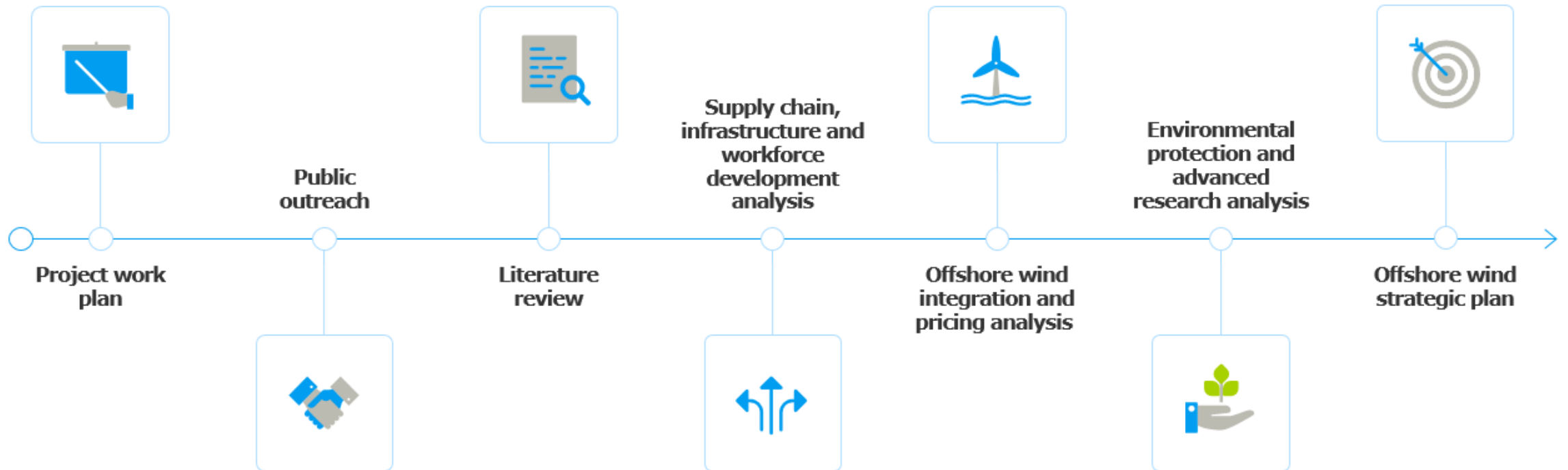
- Supply Chain Infrastructure & Workforce Development
- Energy Pricing & Markets
- Environmental Protection

Stakeholder outreach and engagement is important throughout the process.



The NJBPU Offshore Wind Strategic Plan

Scope of Work



Your Opportunity to be Actively Involved

You're Invited

**New Jersey
Offshore Wind
General Public Stakeholder Meetings**

December 4, 2018 | 1:00pm-3:00pm
Lyndhurst, NJ

December 5, 2018 | 6:00pm-8:00pm
West Windsor Township, NJ

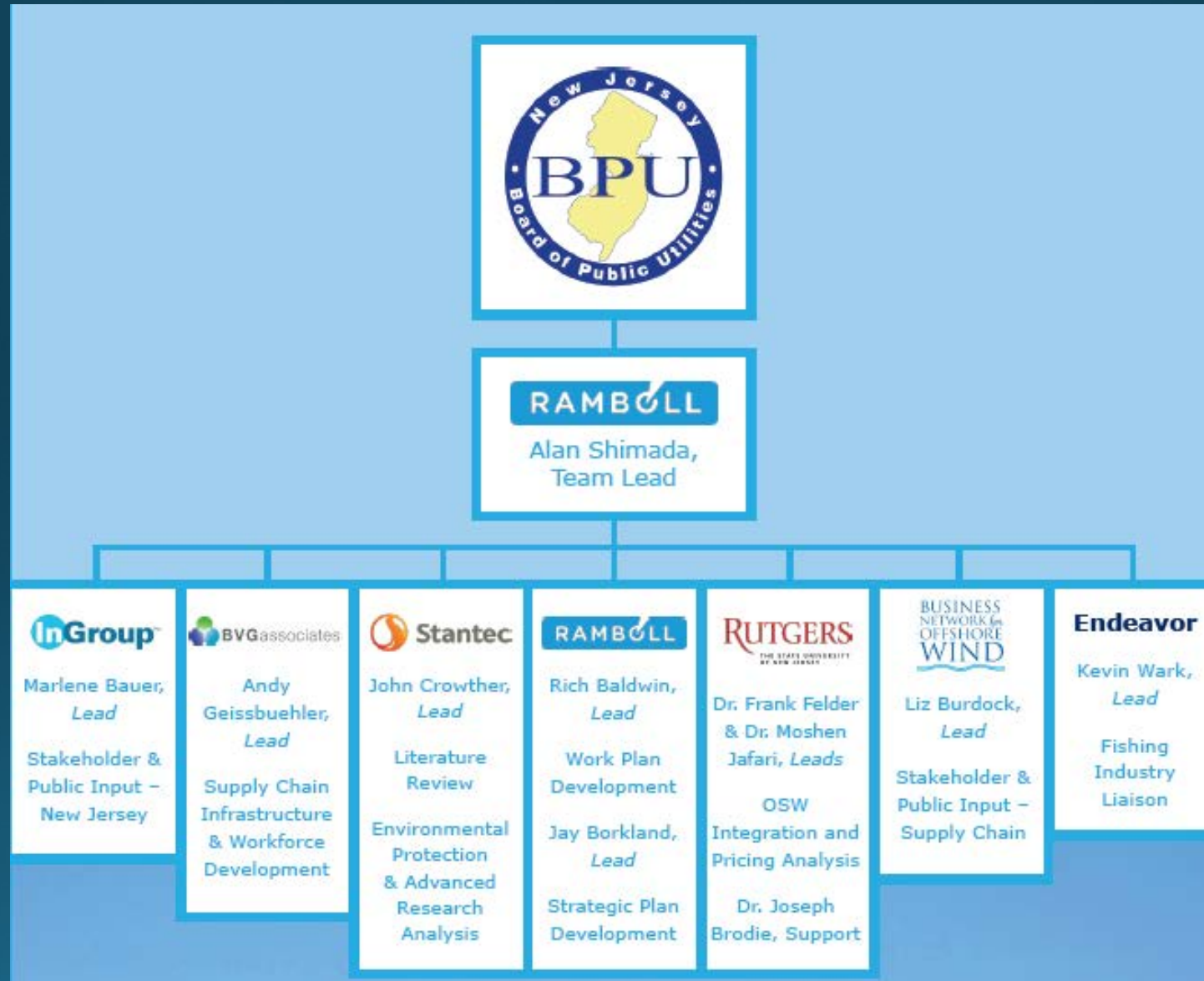
December 13, 2018 | 6:00pm-8:00pm
Atlantic City, NJ



#OffshoreWindNJ  
NJCleanEnergy.com/NJ-Offshore-Wind



Our Team



Offshore Wind is (Much) More than Windmills



Offshore Wind is a Fully Integrated Layered Industry

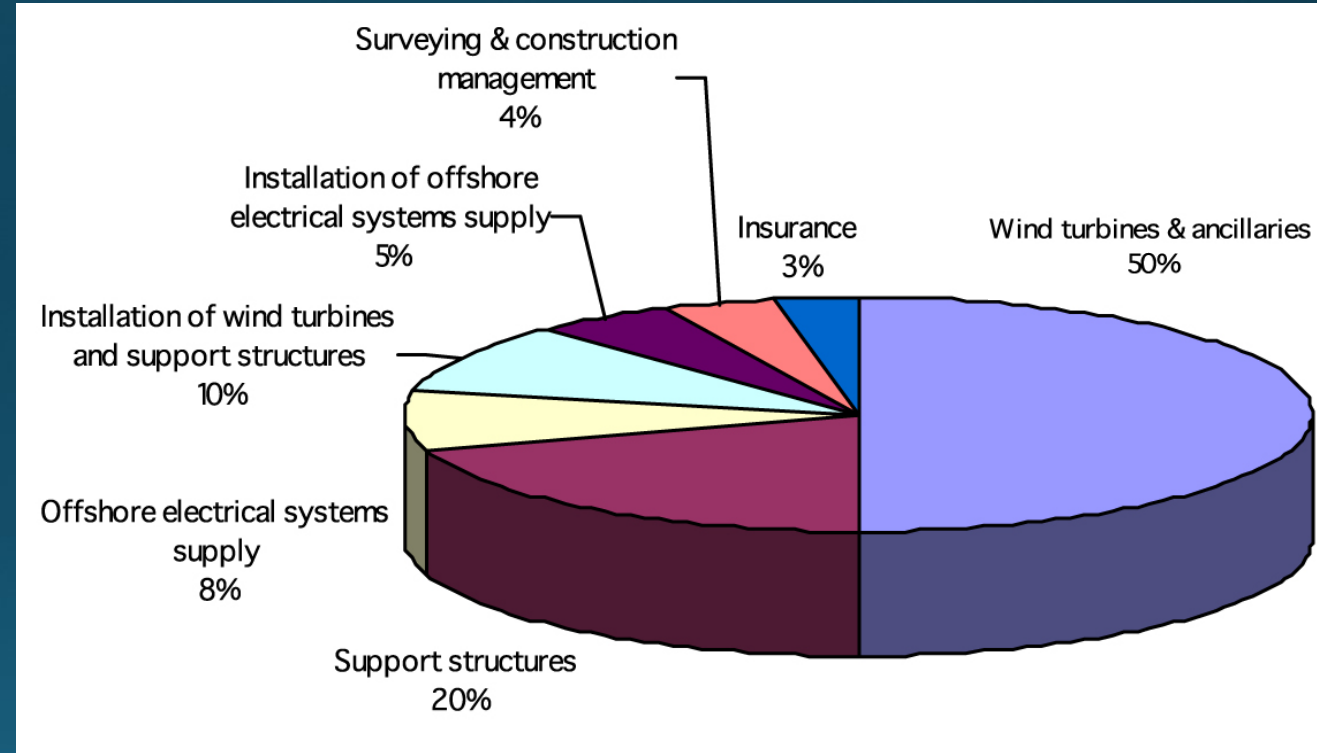
Development & Installation



Engineering

Logistics

Shipping



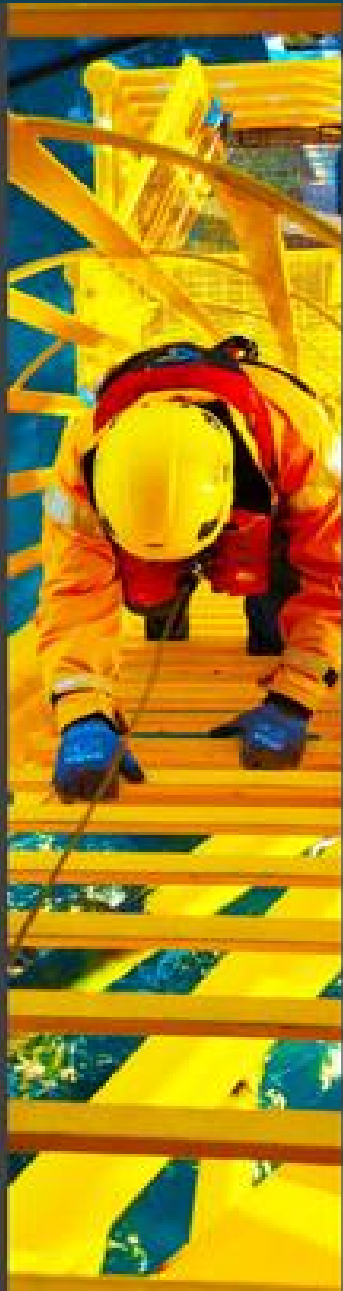
Finance

Legal

Insurance

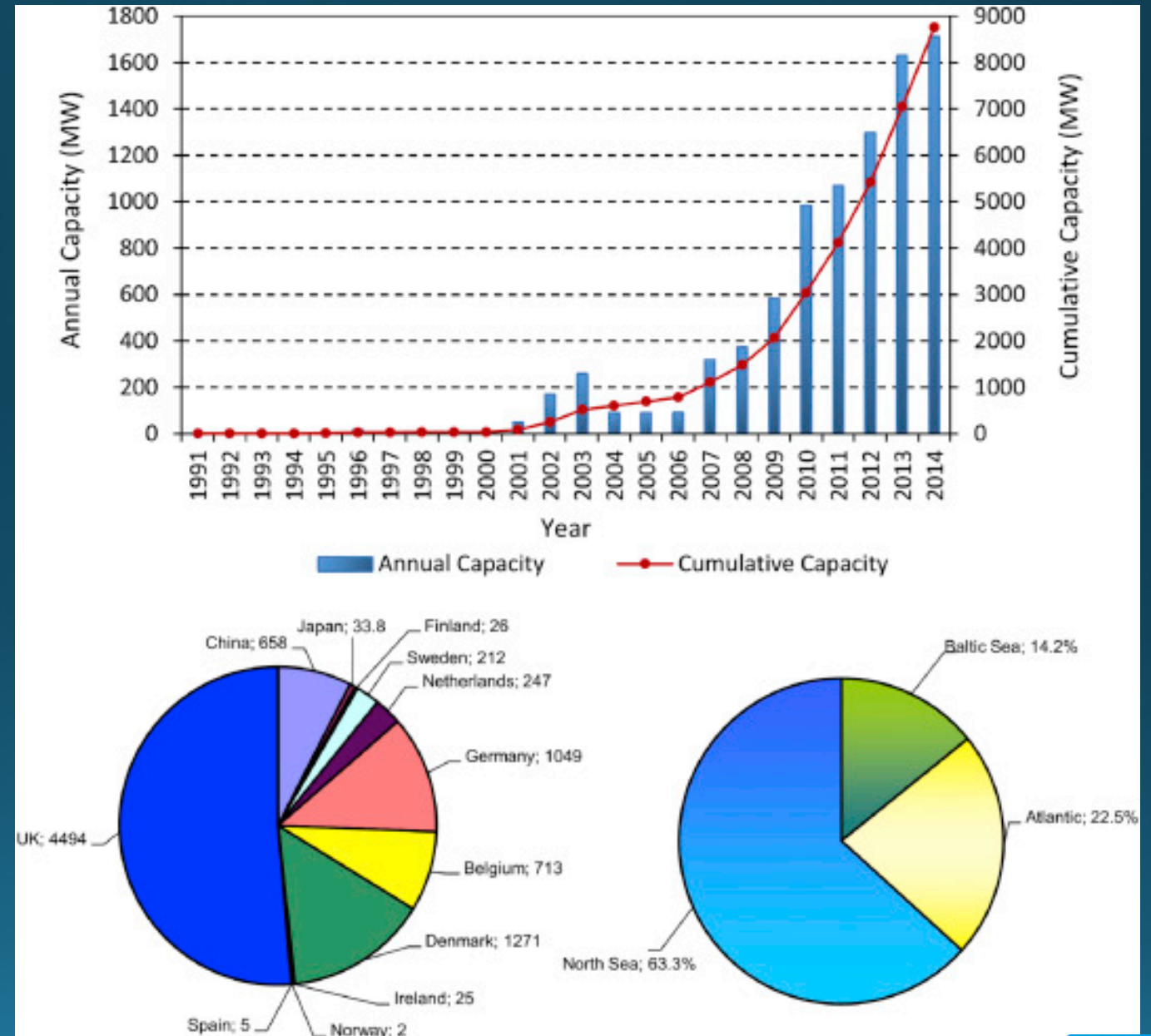
Port Infrastructure

Offshore Wind is (Much) More Than Windmills



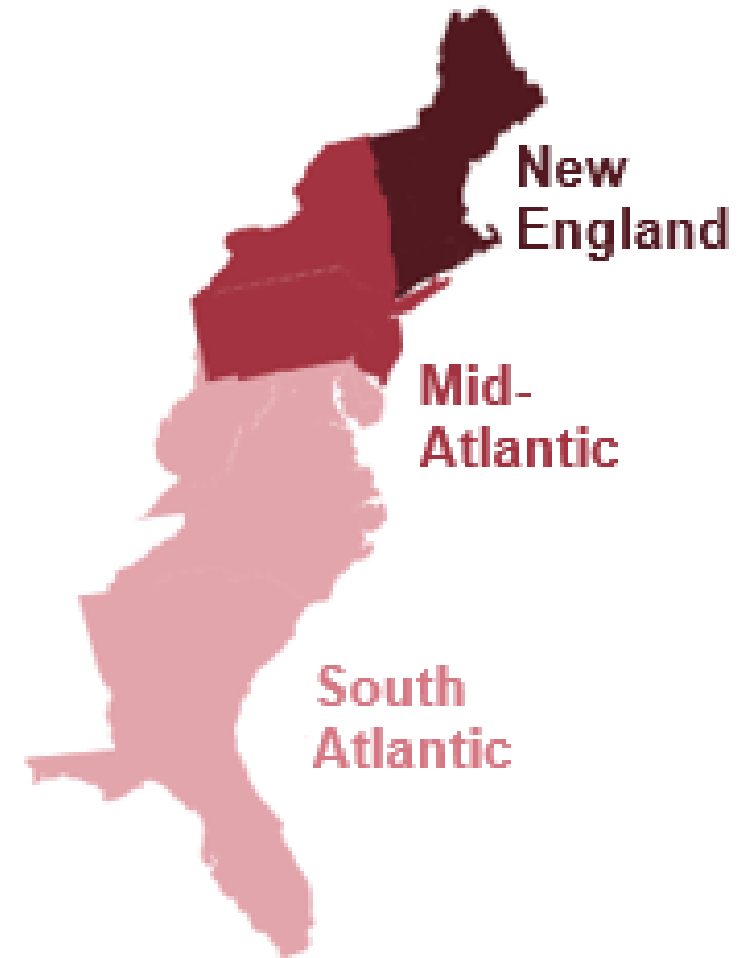
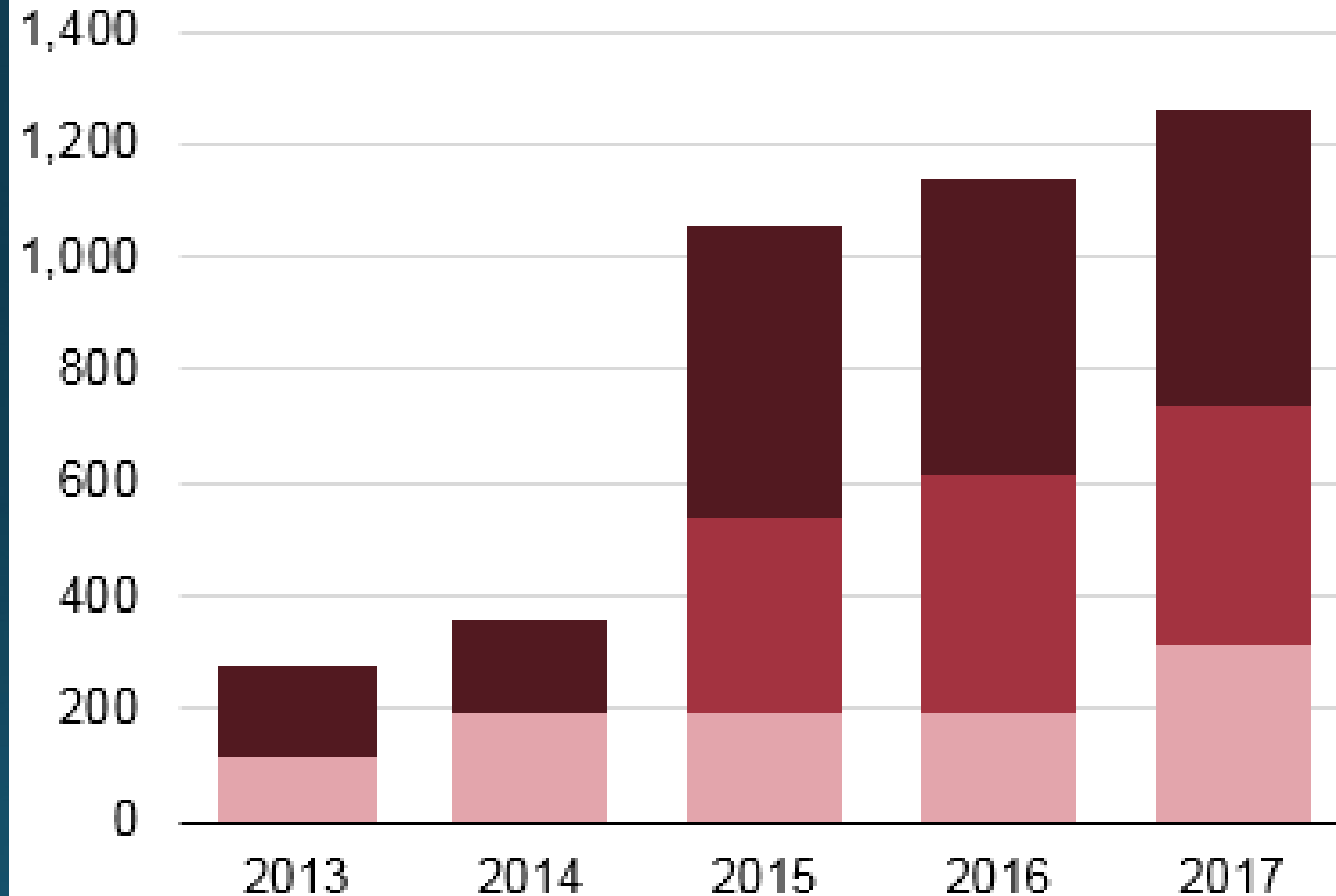
international
BUSINESS GUIDE '18

offshore
WIND



Offshore Wind is (Much) More Than Windmills

Cumulative purchased federal leases for offshore wind land area
thousand acres



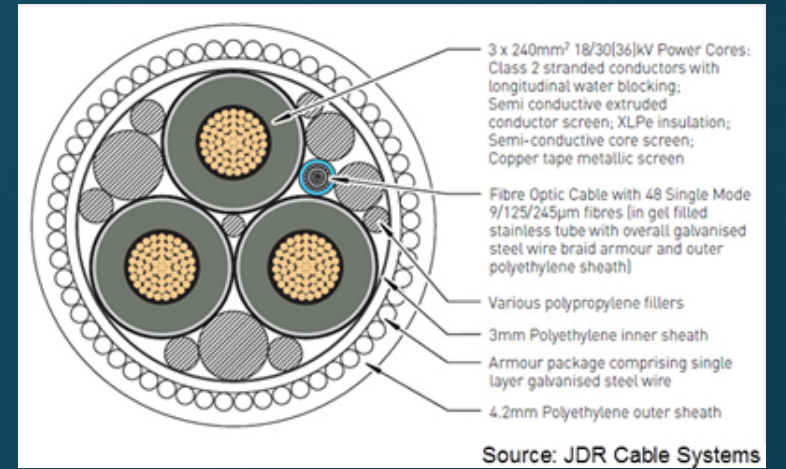
Bankable + Insurable = Risk Management



\$ 4 Billion Investment



Complicated Systems



Complicated Supply Chain

RAMBOLL





Complicated Transport

Complicated Land Use:

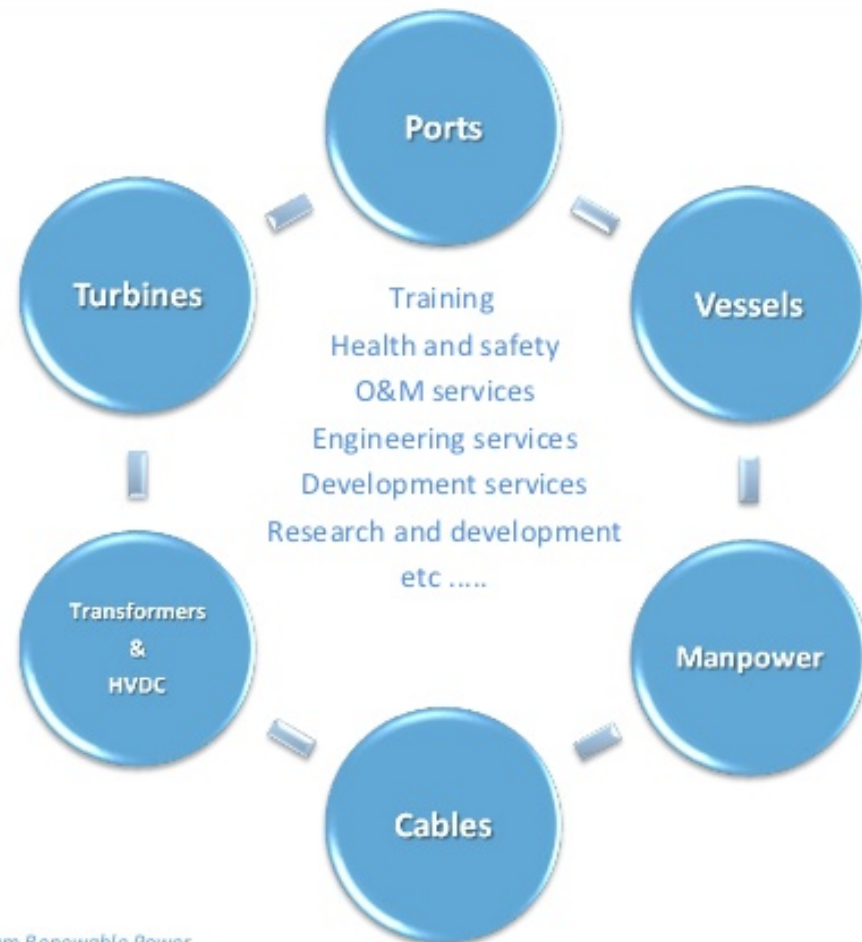




Impact to the Economy: Primary,
Secondary, Induced Effects

Supply Chain Elements

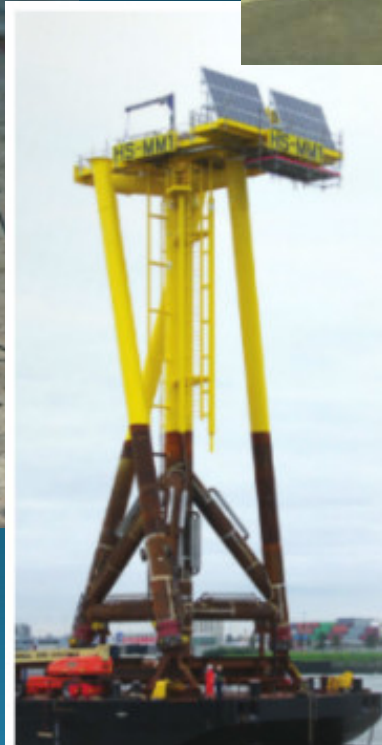
The supply chain elements



Source: Mainstream Renewable Power



Foundation Elements

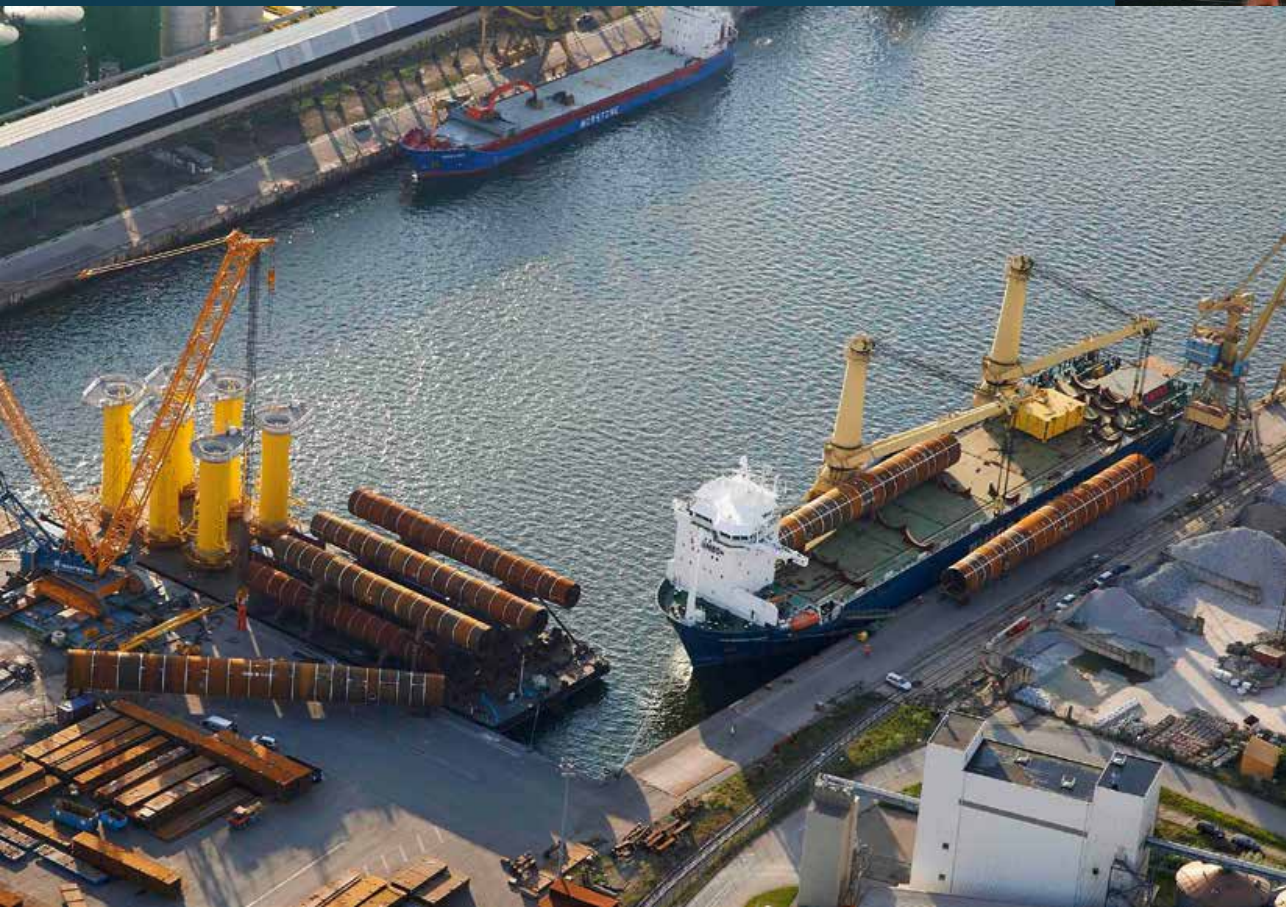


Monopile Foundation Pieces



Pictures Courtesy: EEW

Shipping Monopiles

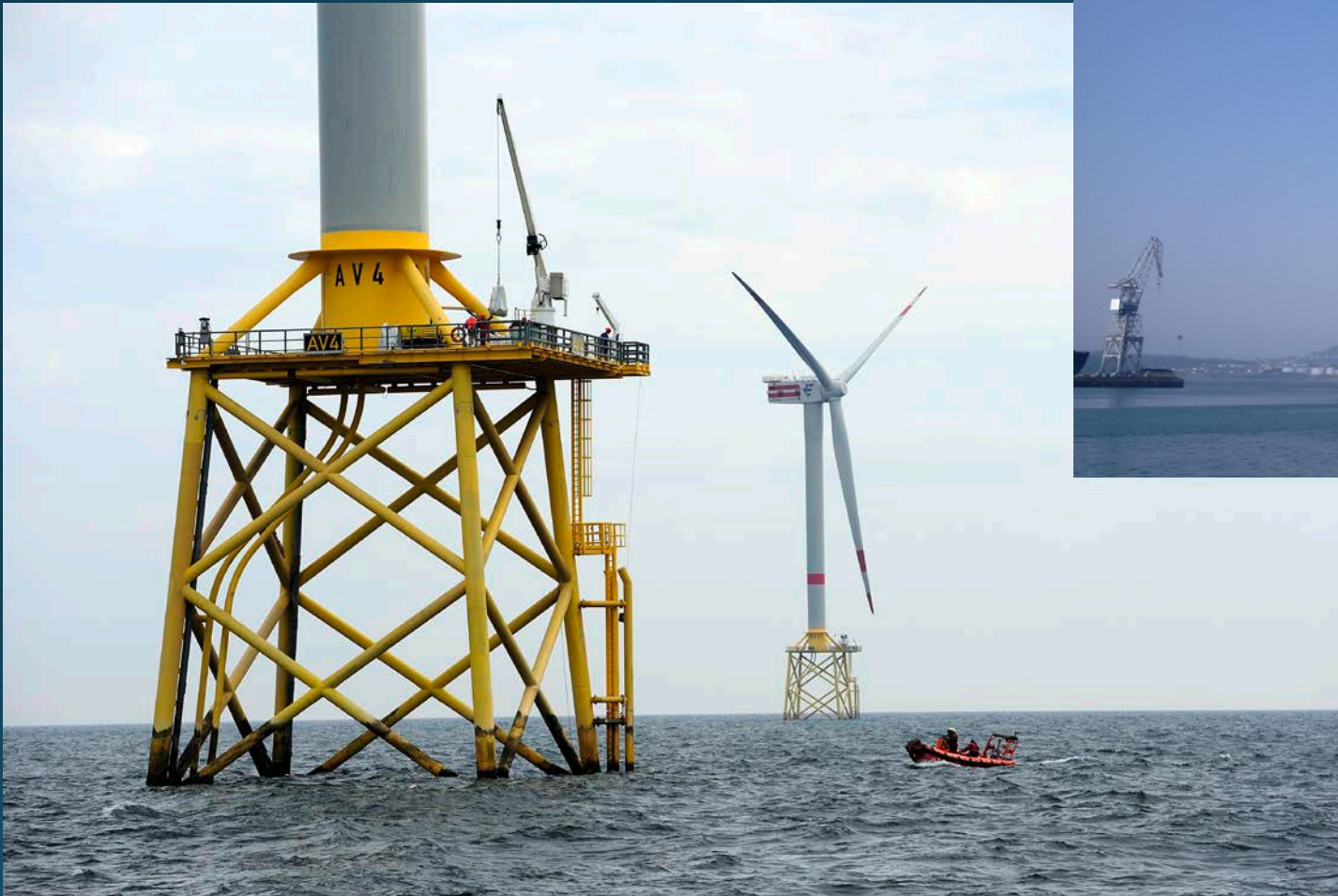


Pictures Courtesy: EEW

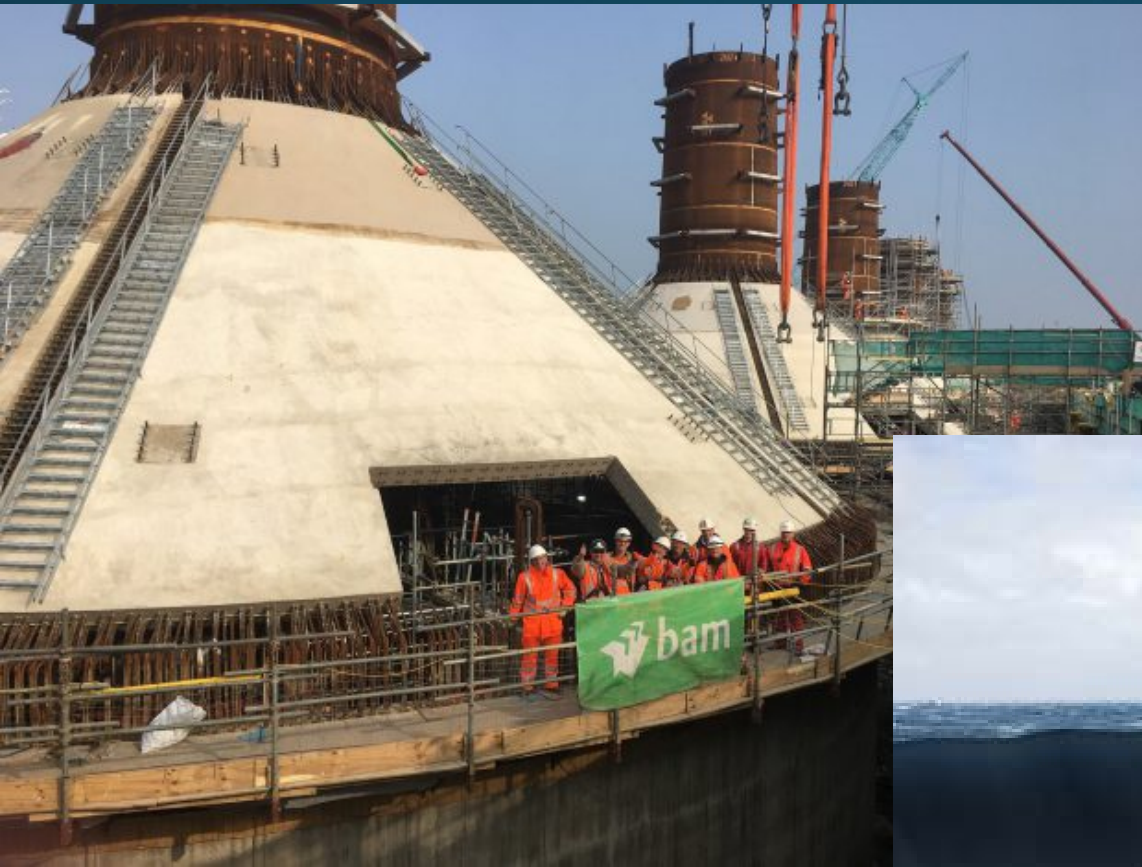
Jacket Foundations in the U.S.



Jacket Foundations



Gravity Foundations



Transition Pieces

400 – 800 tons



Tower Sections

150 – 250 feet / 100 – 200 ton



Nacelle



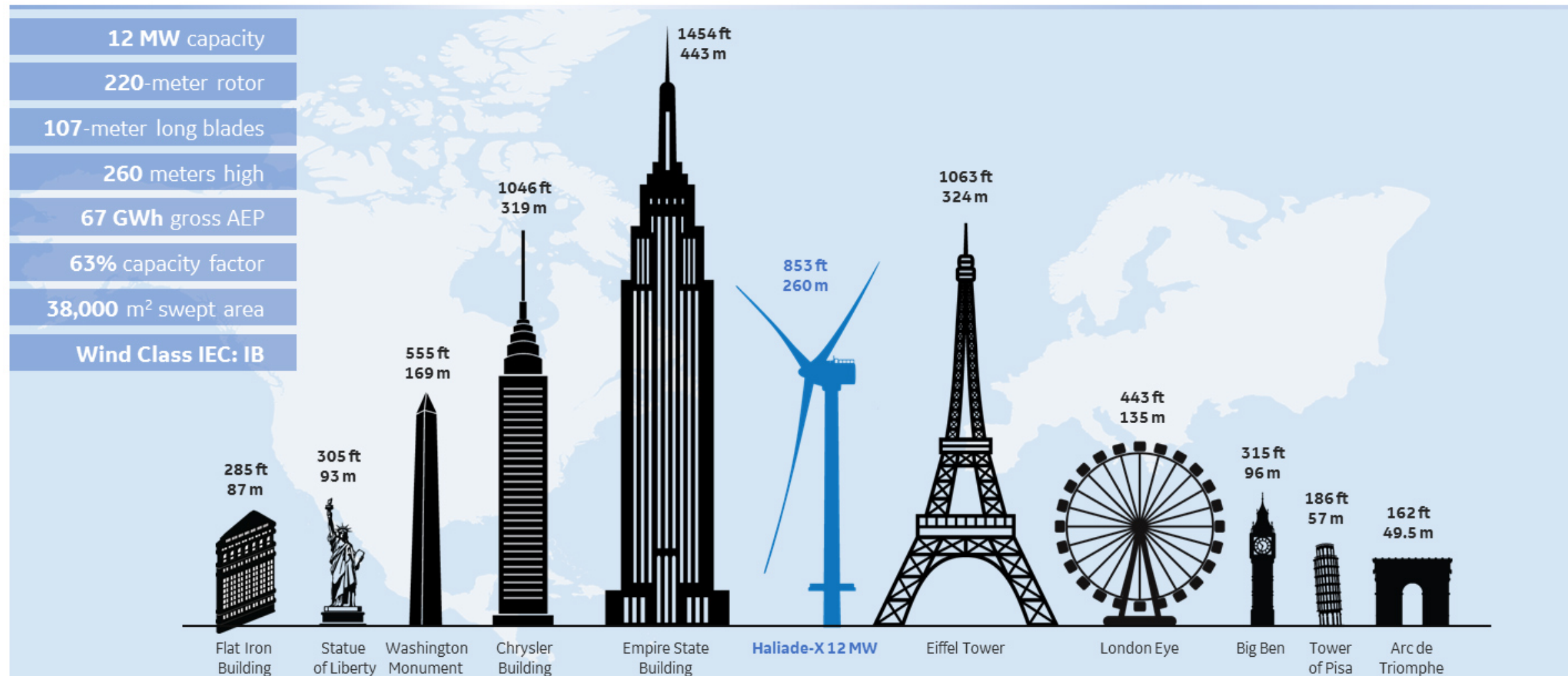
HALIADE-X 12 MW



GE Renewable Energy is developing **Haliade-X 12 MW**, the biggest offshore wind turbine in the world, with **220-meter rotor**, **107-meter blade**, leading capacity factor (**63%**), and **digital capabilities**, that will help our customers find success in an increasingly competitive environment.

One **Haliade-X 12 MW** can generate **67 GWh annually**, which is **45% more** annual energy production (AEP) than most powerful machines on the market today, and twice as much as the Haliade 150-6MW.

The **Haliade-X 12 MW** turbine will generate enough clean power for up to **16,000** European households per turbine, and up to **1 million** European households in a 750 MW configuration windfarm.



Blades



Substations & Grid



Cable



Logistics



Operation & Maintenance



Infrastructure and Port Facilities



Bremerhaven, Germany

Landside/Port Infrastructure



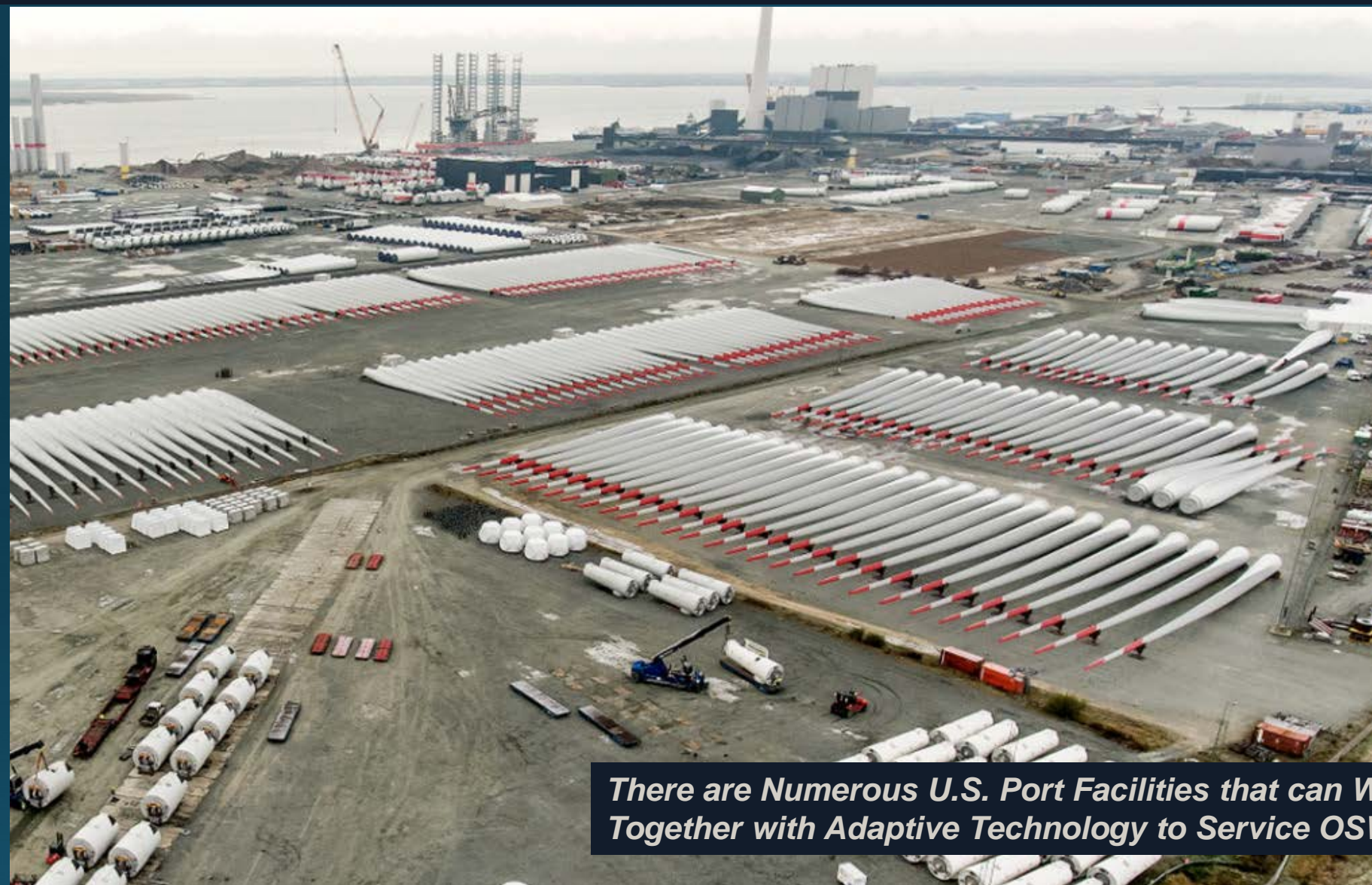
A Marshalling Port

NEED:

- Load Bearing Capacity Requires 4,000 lb/sf
- Need 20,000 lb/sf for Point Load “Kneeling” Capacity
- 28 – 30 Acres Minimum (Marshalling Port)
- No overhead restrictions
- Protected Harbor
- Exclusive Use
- 1,000-feet of Quayside
- Open Land for Laydown
- Robust Facilities (Lighting, Utilities, Quay Fendering)



The Differences?



There are Numerous U.S. Port Facilities that can Work Together with Adaptive Technology to Service OSW.

European Port Facilities have evolved into mega-centers....with 100's of acres of land and 1,000's of feet of quayside.



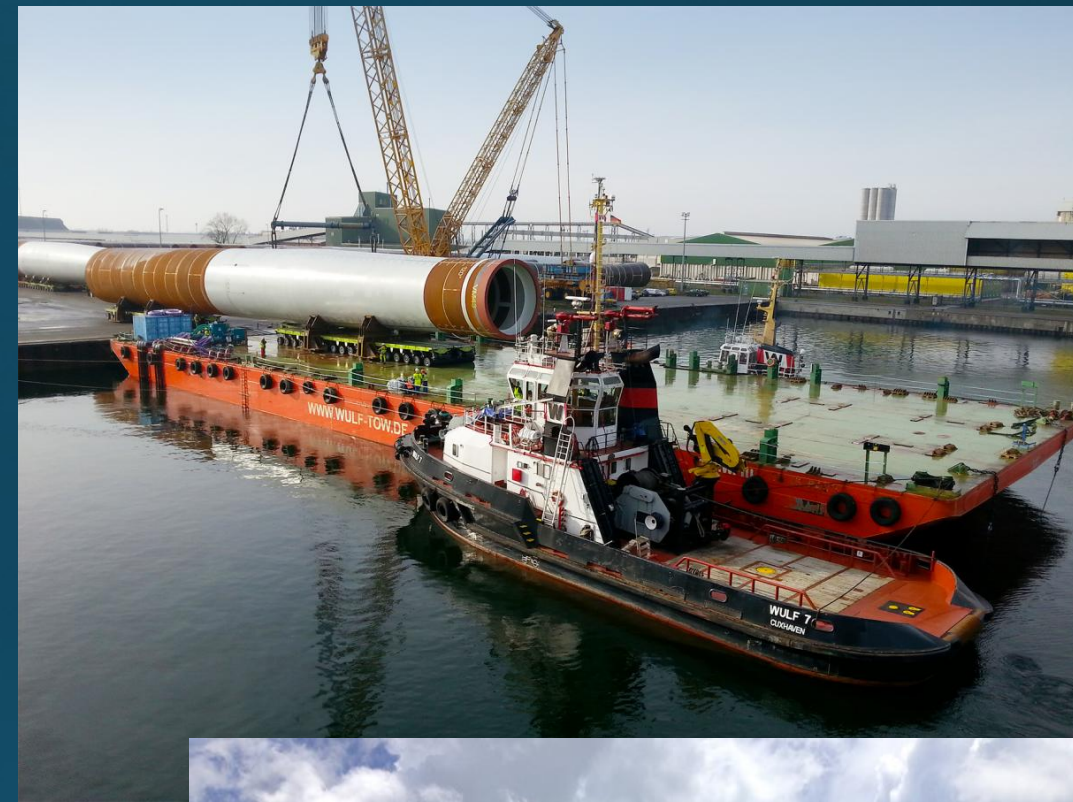
U.S. Ports & Infrastructure

The Future Requires Two-Way Adaptation: U.S. Ports ↔ European Processes.

Moral of the Story:

Prediction:

- US Offshore Wind will develop in its own uniquely “American Way”
- There is not the single “Mega-Port” where Marshalling and Manufacturing Occur together
- U.S. Ports will develop as a series smaller assets “sewn” together by a new Logistics Industry
- Providing Opportunity along numerous pathways.....



New Technology in the Works:



New Logistics Technologies being adapted:



DISCUSSION



***The Result Will be a Stronger,
More Vibrant, and More Resilient
Offshore Wind Industry.***



**‘The Future’s So
Bright....We Gotta Wear
Shades.....’**