



AGGREGATION & COLLABORATION IN GREEN BUSINESS PROGRAMS

LEVERAGING A NETWORK TO INCREASE SCALE OF IMPACT

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KEY LEARNING OBJECTIVES:

1. (CASE STUDY) HOW A BETTER CITY LEVERAGED ITS NETWORK TO INCREASE ITS IMPACT ON REDUCING GHG EMISSIONS.
2. WHAT SHOULD OTHER GREEN BUSINESS ENGAGEMENT ORGANIZATIONS THINK ABOUT IN PURSUING SIMILAR EFFORTS?
3. IS AGGREGATION/COLLABORATION THE NEXT FRONTIER FOR ACCELERATING CLIMATE EFFORTS? (DISCUSSION)

WHO IS A BETTER CITY?



- NONPROFIT BUSINESS MEMBERSHIP ORGANIZATION
- SEEKS TO IMPROVE BOSTON AND THE REGION'S **ECONOMIC HEALTH, ACCESS, SUSTAINABILITY, AND QUALITY OF LIFE** THROUGH **PLANNING, APPLIED RESEARCH, TARGETED SERVICES AND ADVOCACY**
- ABC'S MEMBERSHIP IS MADE UP OF OVER **130** OF THE BOSTON'S **LARGEST EMPLOYERS**
- THE ENERGY & ENVIRONMENT UNIT STAFFS THE **COMMERCIAL REAL ESTATE WORKING GROUP (CREWG)** FOR THE GREEN RIBBON COMMISSION
- ADMINISTERS A GHG EMISSIONS BENCHMARKING AND LEADERSHIP PROGRAM CALLED THE **CHALLENGE FOR SUSTAINABILITY**



HOW CAN ABC FURTHER ASSIST OUR MEMBERS AND THE CITY IN MITIGATING AGAINST AND ADAPTING TO CLIMATE CHANGE?

A Better City is committed to helping **Boston** meet its **GHG reduction goals**

Challenge
Participants are aggressively pursuing energy efficiency on the demand side and a few have **reached the 25% target**

A Better City agrees with the GRC that the **2050 goal will require the decarbonization of energy supply**

A Better City can have a transformative impact by **increasing Members' adoption of renewable energy**

CHALLENGE FOR SUSTAINABILITY PARTICIPANTS HAVE HIGH ELECTRICITY DEMAND



THEY COLLECTIVELY CONSUME OVER
600,000MWh OF ELECTRICITY
ANNUALLY

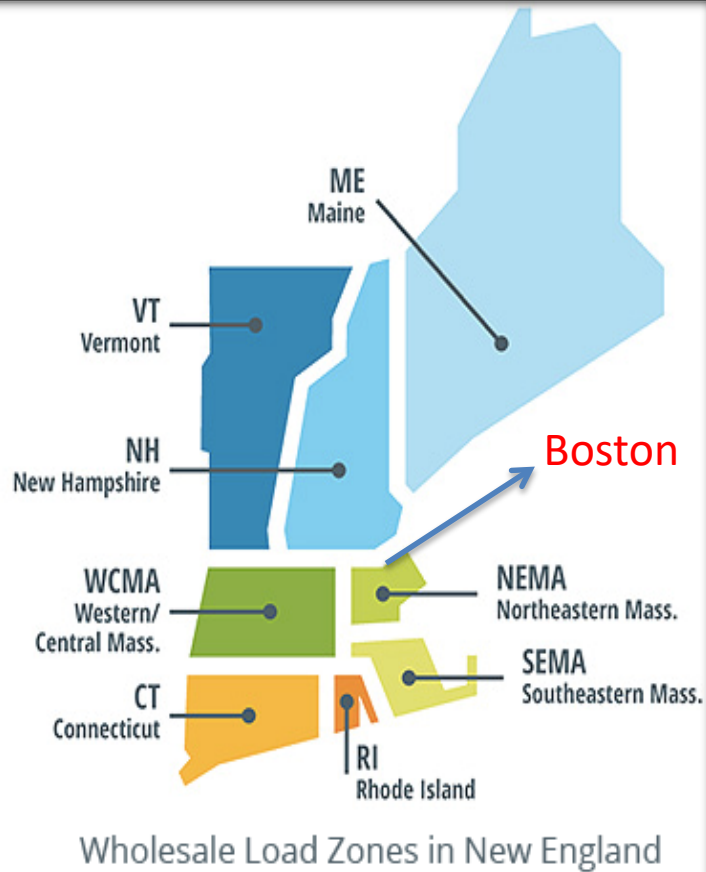
LIMITED ONSITE SURFACE AREA



LIGHTER COLOR = HIGHER YIELD

[Image Source: Mapdwell](#)

LIMITED OFFSITE OPPORTUNITY IN NEMA LOAD ZONE



REC PURCHASES DO NOT ADD CAPACITY



[Source: 105MW Solar Farm in Eastern Europe](#)

CHALLENGES IN THE COMMERCIAL REAL ESTATE SECTOR

LEASE STRUCTURE
BOSTON IS A TRANSACTIONAL MARKET
TRADITIONAL ELECTRICITY PROCUREMENT





IN ORDER FOR A NEW RENEWABLE ENERGY PROJECT TO ACQUIRE
FINANCING DEVELOPERS MUST SECURE A LONG-TERM, CREDITWORTHY
OFFTAKER FOR THE ELECTRICITY AND RECs



PIPELINE OF SHOVEL-READY RENEWABLE ENERGY PROJECTS

[Source: Gesner Wind Farm, Ontario, Canada](#)

VALUE PROPOSITION

<u>Criteria</u>	<u>Offsite PPA</u>
Business Case	Generate revenue; Stabilize Costs/Hedge Volatility RECs embedded
Transferrable	Not tied to any one site
No or low upfront investment	Consulting fees only
Environmental Benefit	Retain & Retire RECs
Additionality; Eligible for Tax Credit (2015)	Pipeline of 'shovel-ready' projects
Large Scale	Offsite projects built at largest scale; Aligns with Participant electricity demand
No O&M Responsibility	Project developer/owner is responsible

***“WE HELPED DEVELOP A NEW RENEWABLE
ENERGY PROJECT”***



INITIAL INTEREST SURVEY

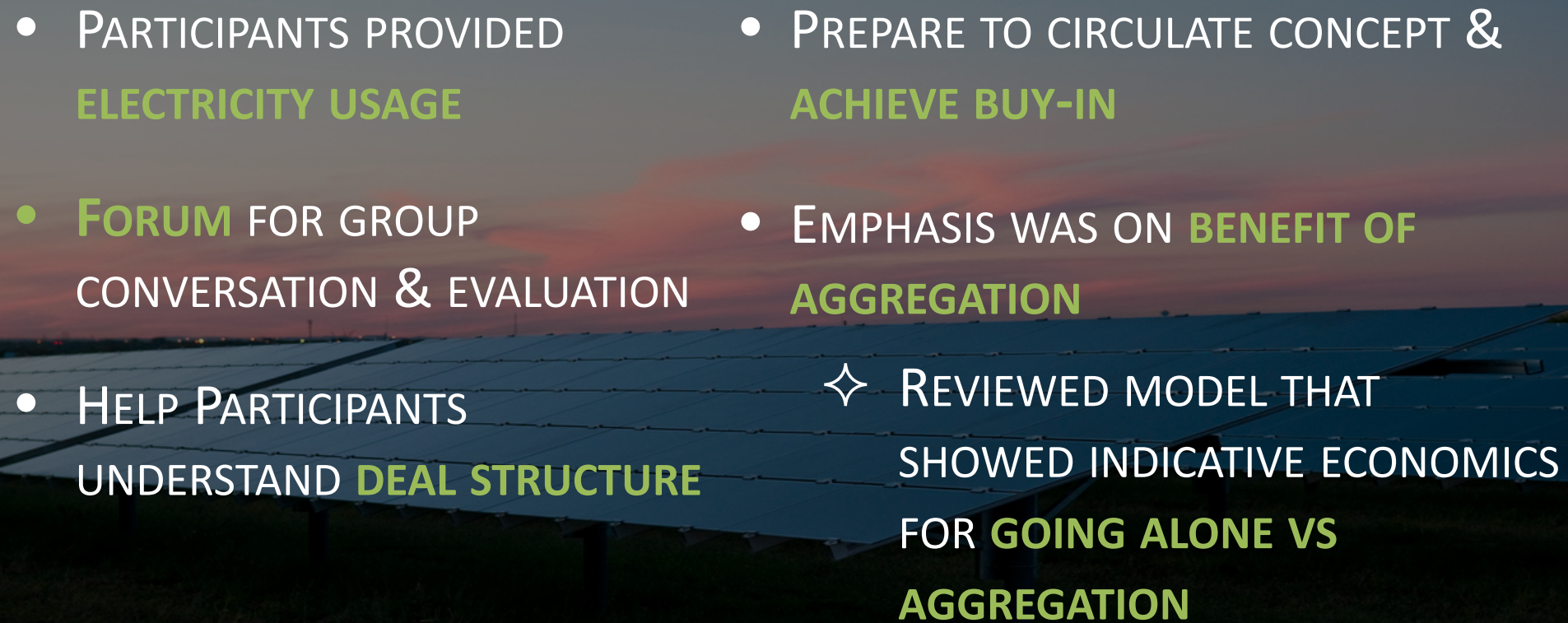
1. HOW WOULD YOU CHARACTERIZE YOUR ORGANIZATION'S LEVEL OF **FAMILIARITY** WITH RENEWABLE ENERGY SYSTEMS AND PURCHASING OPTIONS?
2. HAS YOUR ORGANIZATION **PURCHASED** RENEWABLE ENERGY IN ANY OF THE FOLLOWING METHODS? (SELECT ALL THAT APPLY)
3. DOES YOUR ORGANIZATION HAVE A **PLAN TO PURCHASE** RENEWABLE ENERGY IN ANY OF THE FOLLOWING METHODS?
4. DO YOU KNOW THE PRIMARY **DECISION MAKER** FOR THESE TYPES OF PROJECTS ?
5. WOULD YOU LIKE **MORE INFORMATION** ABOUT THE RELATIVE MERITS OF COLLABORATIVE PROCUREMENT FOR RENEWABLE POWER AND EACH OF THESE FINANCING MECHANISMS?

A photograph of an offshore wind farm in Denmark, featuring several large wind turbines with three blades each, mounted on tall, slender concrete or steel towers. The turbines are situated in a calm sea under a cloudy sky. The perspective is from a low angle, looking out towards the horizon where more turbines are visible in the distance.

CO-REP KICKOFF MEETING

- **SIX ORGANIZATIONS:** HOSPITALITY, FINANCIAL SERVICES, COMMERCIAL REAL ESTATE, PARKING GARAGE
- LAID OUT **ABC's ROLE**; DEVELOPMENT SERVICES FEE
- INTRODUCED A HYPOTHETICAL **TIMELINE**
- REVIEWED **TECHNICAL ASSISTANCE RFQ**
- REQUESTED FEEDBACK ON **RFQ EVALUATION MATRIX**

[Source:](#)
[Middelgruden](#)
[Offshore Wind Farm](#)
[in Denmark](#)

- 
- PARTICIPANTS PROVIDED **ELECTRICITY USAGE**
 - **FORUM** FOR GROUP CONVERSATION & EVALUATION
 - HELP PARTICIPANTS UNDERSTAND **DEAL STRUCTURE**
 - PREPARE TO CIRCULATE CONCEPT & **ACHIEVE BUY-IN**
 - EMPHASIS WAS ON **BENEFIT OF AGGREGATION**
 - ✧ REVIEWED MODEL THAT SHOWED INDICATIVE ECONOMICS FOR **GOING ALONE VS AGGREGATION**

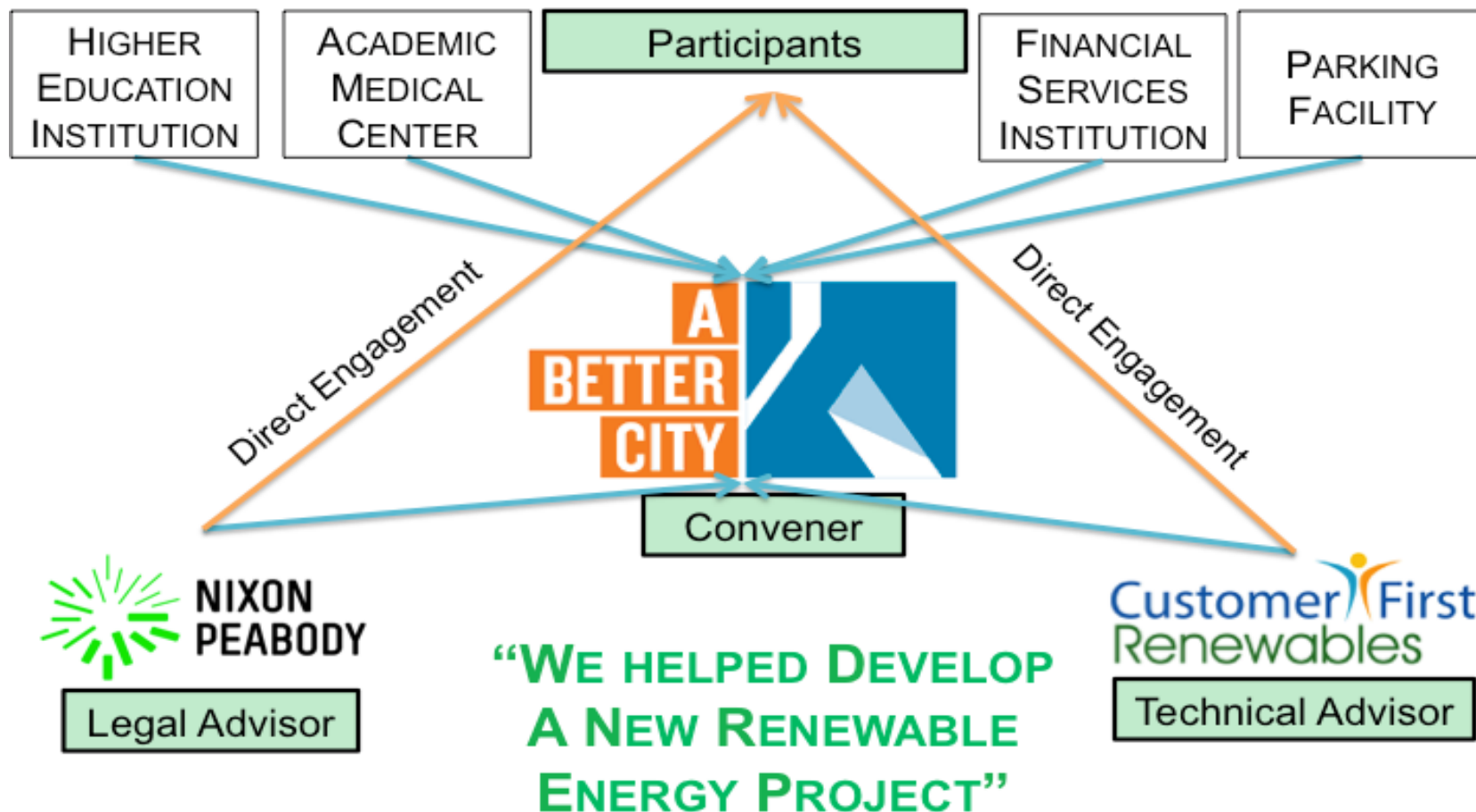
[Source: Blue Wing Solar- San Antonio](#)

ABC/CFR HALF-DAY WORKSHOP



Strategic Alliance

CASE STUDY #2: ABC'S GROUP RENEWABLE PURCHASE



CO-REP PARTICIPANT ALIGNMENT MATRIX

Key RFP Parameters	Response Options	Preference (Aggregate)	Weight (Aggregate)	RFP Specification
Geographic Location	In Region/Nationwide	In Region	14%	Issued to six power markets
Developer Experience	Extensive/Modest/Limited	Extensive	14%	Extensive
Additionality	Yes/No	Yes	11%	Existing projects allowed
REC Treatment	Project RECs/Substitute RECs/Either	Project RECs	10%	Substitute & Project RECs (depending on region)
1 st Year Price Level	Immediate Savings/Same Price as Today/ Short-term Premium	Immediate Savings	9%	Not directly depicted in RFP
PPA Price Escalator	Flat/1%/2%	Flat	8%	Flat, 1%, 2%
Carbon Avoidance	Low/Medium/High	High	6%	Not directly depicted in RFP
Ability to meet ITC Deadline	Yes/No	Yes	6%	Yes
Financial Strength of Developer	Balance Sheet Developer/Project Finance/ Either	Balance Sheet Developer	5%	Not directly depicted in RFP
Generation Technologies	Wind/Solar/Either	Either	4%	Wind, Solar, Geothermal
Preferred Contract Term	15/ 20/ 25/ Other	15-20	4%	15,20, 25 years & Other (12 year)




BID RESPONSE

- **42 TOTAL BIDS** FROM **39 UNIQUE PROJECTS** (25 WIND AND 14 SOLAR)
 - ONLY 2 EXISTING PROJECTS - 1 EACH FOR MISO & ISO-NE
 - **15** DIFFERENT **DEVELOPERS**
 - **14** DIFFERENT **STATES** **6** DIFFERENT **RTOs**
 - TOTAL NAMEPLATE **CAPACITY** OF ALL BIDS: **~4,900MWAC**
 - TOTAL ESTIMATED **PRODUCTION**: **~9,000GWH**
- 



SUCCESS!

IN EARLY SEPTEMBER, **THREE ABC MEMBERS** (UNIVERSITY, HOSPITAL, PARKING GARAGE) COMPLETED NEGOTIATION OF A POWER PURCHASE AGREEMENT TO PURCHASE **100% OF THE OUTPUT** (~150,000MWH'S/YEAR) FROM A **60MWAC SOLAR FARM** IN NORTH CAROLINA!





OBSERVATIONS

&

INSIGHT





IMBALANCED EXPECTATION
=
MISALIGNED EVALUATION

COLLABORATION

=

COMFORT



COHESION & CONSENSUS





ACCESS & OPPORTUNITY

A photograph of a landscape featuring several large wind turbines on a green, rolling hillside. A paved road with white markings leads from the bottom center towards the middle ground, flanked by trees and shrubs. In the background, more turbines are visible on distant hills under a clear sky. A semi-transparent blue rectangular box is overlaid on the upper portion of the image, containing the text "REDUCE RISK → INCREASE REWARD" in white, bold, sans-serif capital letters.

REDUCE RISK → INCREASE REWARD

AGGREGATION BENEFITS FROM SIMPLIFICATION AND MAY REQUIRE STANDARDIZATION



MUTUAL BENEFIT for the GREATER GOOD





WHY GBENN MEMBERS?

- ESTABLISHED **TRUST** WITH A LARGE NETWORK
 - CAN MAINTAIN **OBJECTIVITY**
 - CONVENE **CROSS-SECTOR** ORGANIZATIONS
 - HOST **WORKSHOPS**
 - **FACILITATE** CONVERSATIONS
 - ENSURE **ACCOUNTABILITY & TRANSPARENCY**
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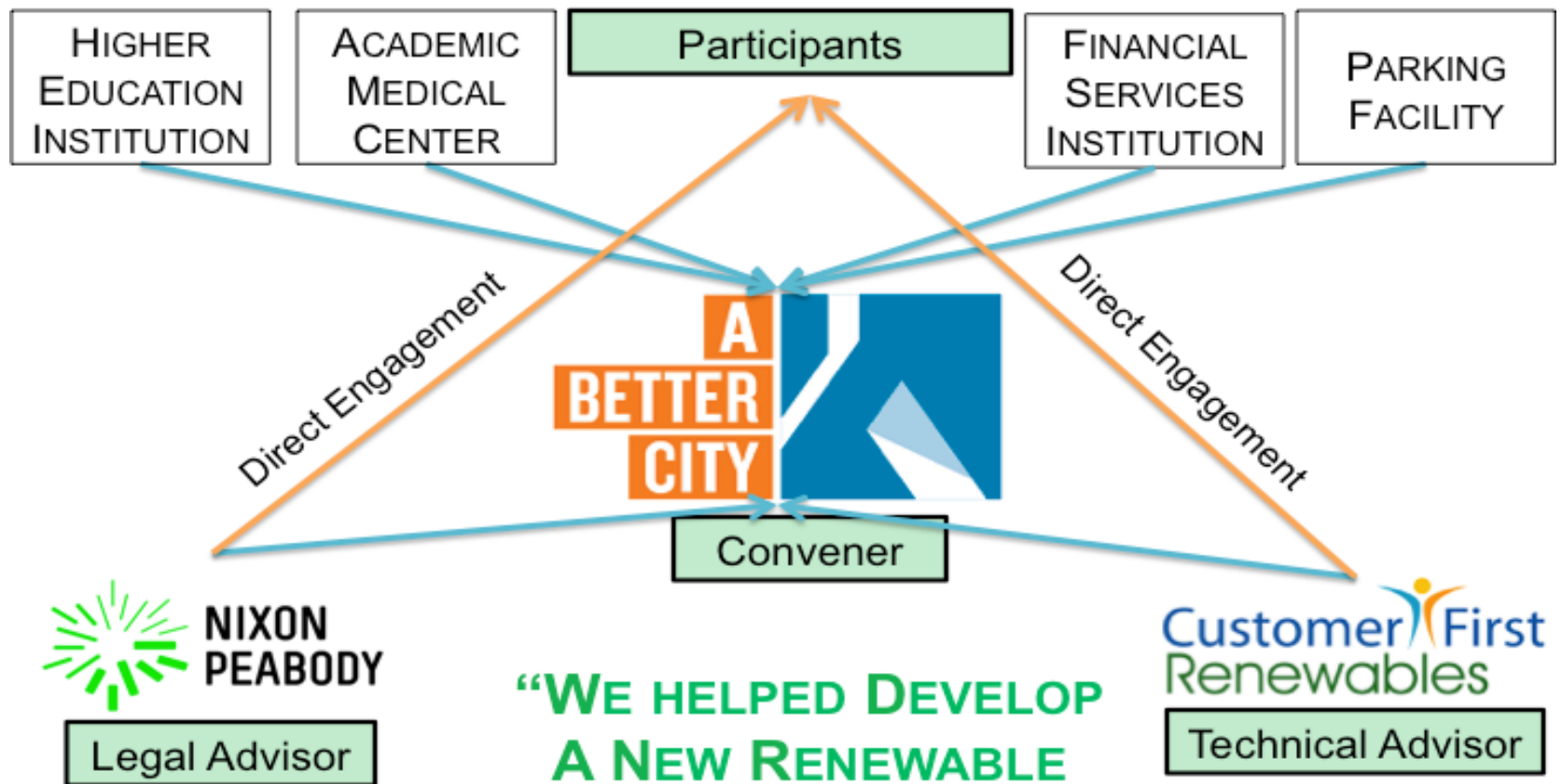
OPPORTUNITY

- REVENUE GENERATION/VALUE CREATION
- SUBSTANTIALLY INCREASE GHG REDUCTION METRICS
- AMPLIFY RECOGNITION
- CATALYZE/FACILITATE A CONVERSATION
- DIVERSIFY OFFERING
- LEARN, GROW, EXPAND
- REDUCE COSTS FOR MEMBERS/PARTICIPANTS
- HELP HEDGE VOLATILITY
- A NEW PROJECT CAN BE ATTRIBUTED TO YOUR EFFORTS!
- CROSS-BORDERS, LOCAL POLICY MAY NOT HAVE AN IMPACT



KEY QUESTIONS FOR YOUR ORGANIZATION?


- DO WE HAVE MEMBERS/PARTICIPANTS WITH SUBSTANTIAL DEMAND? **HOW DO WE REACH THE SCALE?** ARE THEY CREDITWORTHY?
- DO WE UNDERSTAND THEIR **PREVIOUS** RENEWABLE PROCUREMENT **EFFORTS** (IF NOT NO PROBLEM)?
- DO WE HAVE THE **RESOURCES** TO ALLOCATE TO THIS EFFORT? TIME, STAFF, MARKETING/WORKSHOPS?
- ARE THERE **OTHER STAKEHOLDERS** WE CAN/SHOULD INVOLVE?
- ARE THERE ANY **CONFLICTS** OF INTEREST?
- WHAT ARE OUR **KEY PERFORMANCE INDICATORS?** HOW DOES THIS **FIT?**



**“WE HELPED DEVELOP
A NEW RENEWABLE
ENERGY PROJECT”**



QUESTIONS?

- IS THIS AN OPPORTUNITY FOR YOUR ORGANIZATION?
 - ARE THERE OTHER TECHNOLOGIES/SERVICES WHERE ECONOMIES OF SCALE ARE KEY?
 - WHAT DOCUMENTS WOULD BE HELPFUL TO SHARE?
 - WHAT ADDITIONAL INSIGHT DO YOU NEED?
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PRESS RELEASE





THANK YOU!

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