

Draft v7



# RC&S US Strategy

December 2020

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## Executive Summary

- In addition to impacting emissions, solutions need to be **integrated, scalable and replicable**
  - Integrated: Cross-business, with incremental value
  - Scalable: Material cash delivery, with upside potential
  - Replicable: Common approach for multiple customers; cannot "reinvent the solution" for every partner.
- Opportunities at scale in the US are more likely identified within **Low Carbon Opportunity Zones**, where there is a significant overlap of government and corporate activity, as well as opportunity for government policy incentives.
- Value upside will require integrated solutions around **anchor customers**, much like upstream development is anchored around a major field, with overlapping region and corporate options.
- Most large emission sources, and industrial clusters, tend to be concentrated at **major air and marine ports**, e.g. New York, Los Angeles



### Priorities in 2021

- Deliver cash generating options in Houston
- **Originate relationships in the following Low Carbon Opportunity Zones:**

- Chicago
- Los Angeles
- Northeast region (corporate first, then cities)

### Further refine targets and pursue relationships with:

- One major consumer brand, e.g. Verizon
- One major industrial, e.g. Reliance Steel
- One major transportation, e.g. Port Authority of NY/NJ

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# Supporting RC&S cash delivery in the US



*RC&S will need to progress a sizable hopper of opportunities*

Global RC&S Cash delivery by 2030

**\$1bn/yr**

US RC&S cash delivery by 2030  
(40% of global; in line with rest of business)

**\$0.4bn/yr**

Average cash delivery est. per city/corporate

**\$25m/yr**

Projects required to deliver US cash target

- In order for US Region to support delivery of 40% of global RC&S cash delivery by 2030, 12-16 projects will need to reach FID with an average cash delivery of c.\$30m/yr
- Delivery of 12-16 projects by 2030 will require:
  - Material scale for each option
  - Ability to leverage, or replicate, 80% of the “integrated option structure” from one project to the next
- A hopper of options 6-8 times larger, i.e. 70-80 projects being incubated, in order to deliver quality at scale by 2030

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## US Context

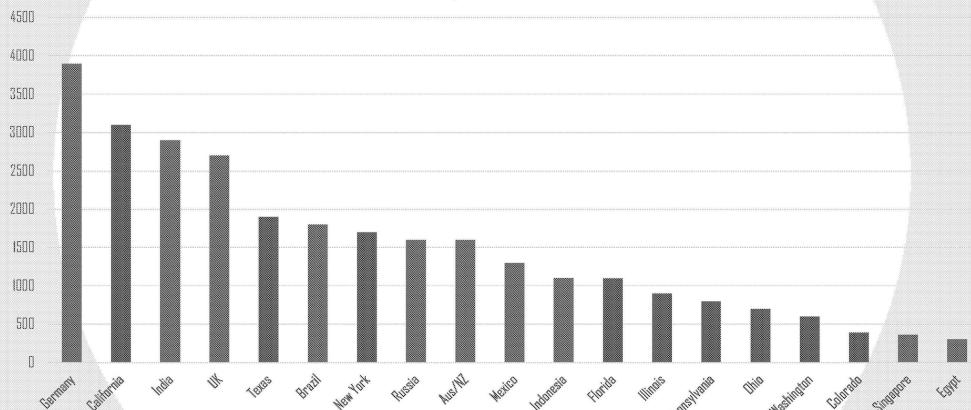
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## The USA: 50 separate GDPs and opportunities



GDP (2019 US\$ million)



\*Excludes China (\$14200) for scale

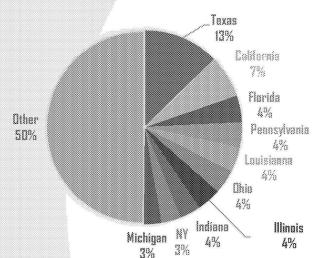
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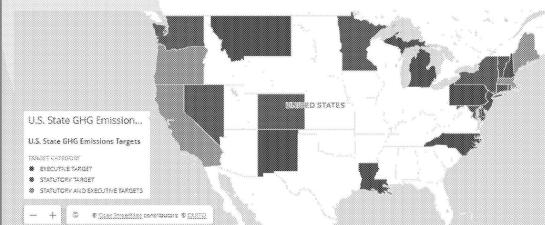
## Where is the opportunity at scale in the US?



ANNUAL CO<sub>2</sub> EMISSIONS (2016)



Total Carbon Footprint (Mt CO<sub>2</sub>)



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- Ten states account for half of all US emissions
- NY, LA and Chicago represent a global-scale footprint
- Western and Northeastern states have the most binding, i.e. statutory, commitment to reducing emissions.
- Only 2 of 10 top emitting states (NY and CA) have statutory commitments to reducing emissions.

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## Region versus City scale of opportunity



*Important to see scope of opportunity above the city level*

Ohio: 207 MTCO<sub>2</sub>e

Northeast Ohio: 60 MTCO<sub>2</sub>e

City of Cleveland:  
17 MTCO<sub>2</sub>e

City of Chicago: 57 MTCO<sub>2</sub>e

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## Changes to Federal Energy and Environment Policy

The Biden administration will focus on strengthening environmental policies and elevating clean energy sources

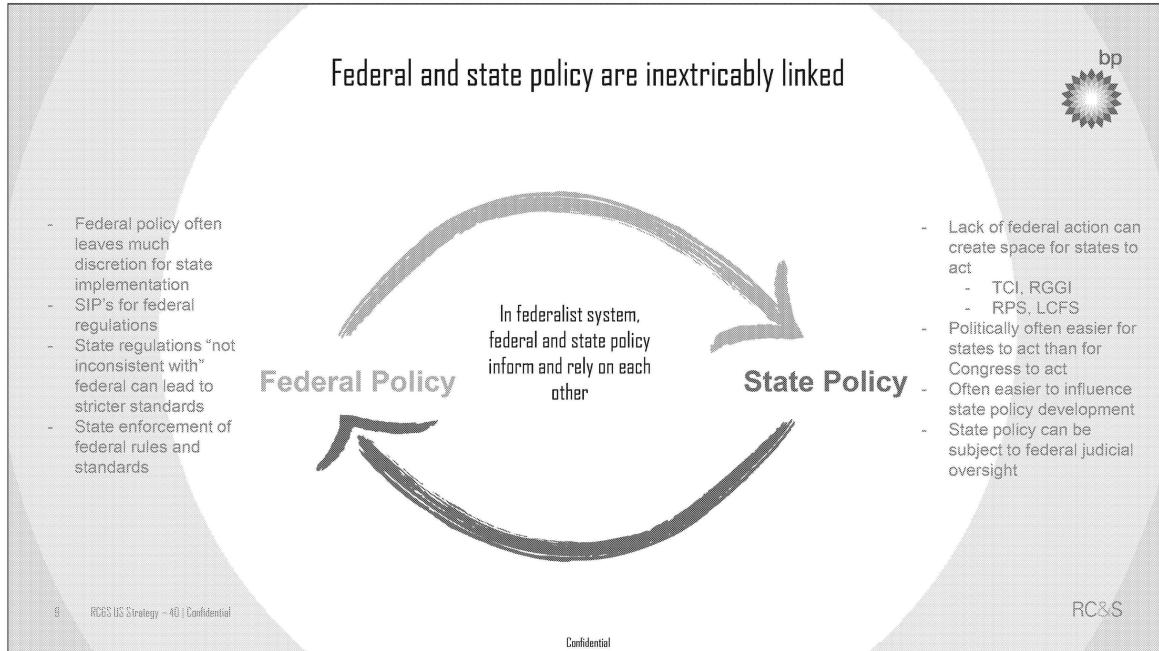


Regulating GHG emissions from the oil & gas, automotive, and power sectors

Requiring that climate policy and GHG emissions considerations inform all relevant federal agency decisions in areas such as:

- Approving multi-state infrastructure projects;
- Siting renewable energy on federal lands and waters;
- Approving leases for oil and gas on federal lands and waters;
- The awarding of federal grants or loan guarantees; and
- Federal procurement practices.

Independent U.S. financial regulators will also focus on addressing financial climate-related risk.



## Individual bp business/enabling strategies in the US



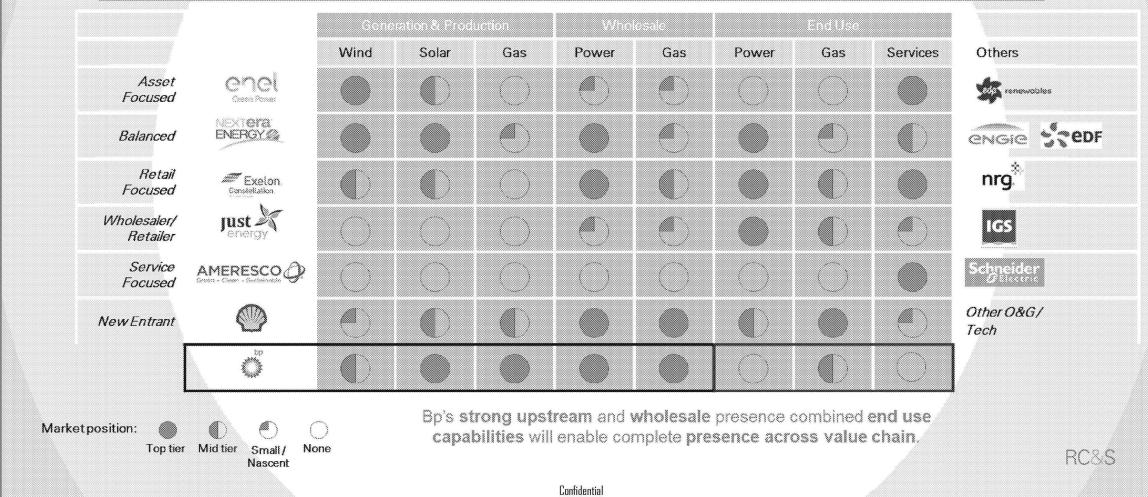
|                       | CSP  | GPTA   | RPT | GBLCE  |
|-----------------------|--|--|-----|--|
| US Strategy in place? | Integrated growth in existing markets, targeted geographic and technology inorganics   | Trading, asset optimization  |     | <ul style="list-style-type: none"> <li>Overarching business strategies in place (not regional)</li> <li>Regional strategies TBD but key country focus areas are clear</li> </ul>   |
| Priorities            | <ul style="list-style-type: none"> <li>Maximize integrated value</li> <li>Increase customer touch points, including convenience</li> <li>Expand offerings to include EV, renewables, hydrogen, and lower-carbon solutions</li> </ul>   | <ul style="list-style-type: none"> <li>Green offering</li> <li>Unique customer solutions</li> <li>Expansion further down the value chain</li> <li>Technology as a growth driver</li> </ul>   |     | <ul style="list-style-type: none"> <li>IGP: Asia, Brazil, India, China focus</li> <li>Bp MSW to biogas through Fulcrum's 1st plant.</li> <li>Renewables: grow onshore wind and LSHP solar. Establish offshore wind. Integration with IIS, CRI, RFP</li> <li>Hydrogen: Heavy duty transport, industrial hubs for CCUS - Houston, Mid-West and North flanked to Cherry Pt &amp; Whiting</li> </ul> |
| Solutions             | <ul style="list-style-type: none"> <li>Targeted customer offering, from branded convenience sites to EV stations to large customers</li> <li>Renewable products or blended hydrocarbon and low carbon solutions</li> <li>Strategic partnerships leveraging bp expertise</li> </ul> | <ul style="list-style-type: none"> <li>Carbon Offset Natural Gas, "CONG" and Carbon offset projects, "CDP"</li> <li>Renewable energy credits, "RECs"</li> <li>Hedging solutions to consumers and producers in new commodities</li> <li>Serving end-use Commercial and Industrial (C&amp;I) customers in power and gas</li> <li>Assess opportunities CC2 storage</li> </ul> |     | <ul style="list-style-type: none"> <li>Establish with IIS, a C&amp;I customer facing business with EAMS capabilities</li> <li>CCUS capabilities</li> <li>MSW to biogas</li> </ul>  |

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## US Competitors

*There is no one doing what bp is doing, at scale and with breadth*



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**Redacted - First Amendment**



## City of Houston Integrated Solution

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## Houston Integrated Offer (working model)



Implemented over time

### Natural Climate Solutions

- Carbon offsets

### Renewables

- Solar at scale, starting with Sunnyside

### Waste to Energy

- Plastics to diesel (Brightmark option)
- Renewable natural gas

### Decarbonization of mobility

- Electrification
- Biofuels

### Decarbonized Infrastructure

- Airports
- Port of Houston
- CCUS

### Building/Energy management

- Leverage expertise of existing partners/ventures
- Pilot opportunity for bp to learn how to scale up

### Opportunity Incubation

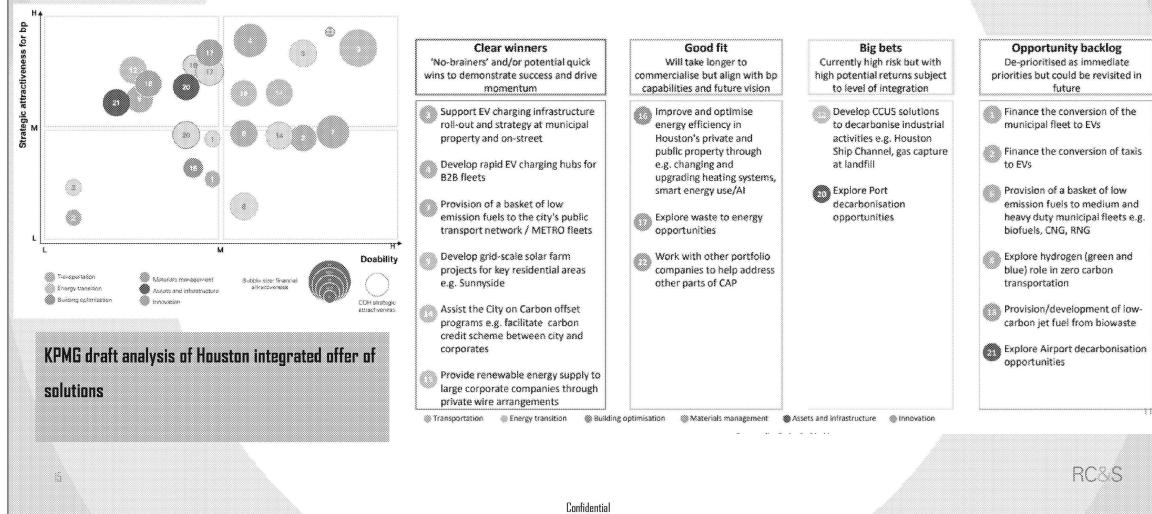
- Hydrogen

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## Illustration of an integrated offer – Houston draft





## Regional Focus Areas

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## State focus areas in 2021/2022

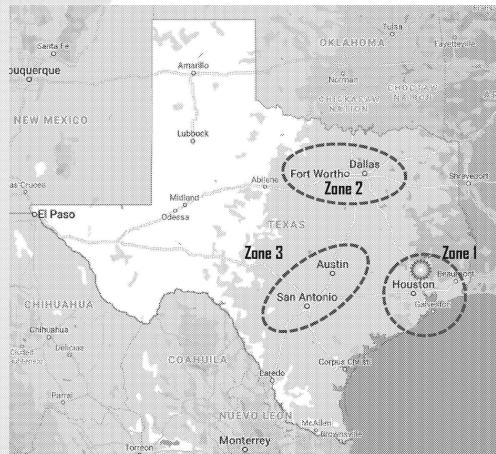


| State<br>(Ranked by emissions) | Material BP<br>Presence | Emissions Reduction Target | Material Corporate<br>presence | Presence of ports | Candidate in<br>2021/2022? |
|--------------------------------|-------------------------|----------------------------|--------------------------------|-------------------|----------------------------|
| Texas                          | ●                       | No                         | ●                              | ●                 | ●                          |
| California                     | ●                       | Yes: statutory             | ●                              | ●                 | ●                          |
| Florida                        | ●                       | No                         | ●                              | ●                 | ●                          |
| Pennsylvania                   | ●                       | Yes, Executive             | ●                              | ●                 | ●                          |
| Louisiana                      | ●                       | Yes, Executive             | ●                              | ●                 | ●                          |
| Ohio                           | ●                       | No                         | ●                              | ●                 | ●                          |
| Illinois                       | ●                       | No                         | ●                              | ●                 | ●                          |
| Indiana                        | ●                       | No                         | ●                              | ●                 | ●                          |
| New York                       | ●                       | Yes: statutory             | ●                              | ●                 | ●                          |
| Michigan                       | ●                       | Yes, Executive             | ●                              | ●                 | ●                          |

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## Regional emission hub Texas

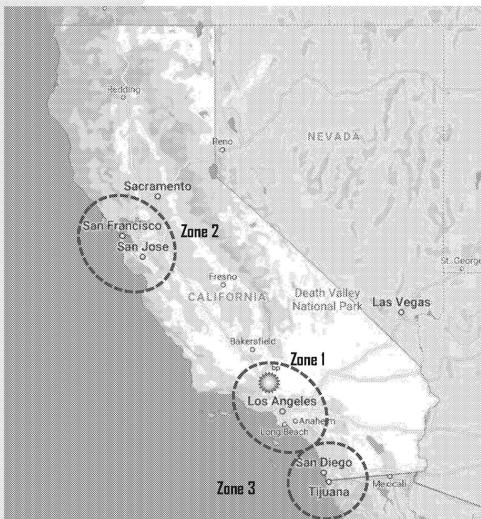


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- Zone 1: Houston/Harris County
  - Focus in 2021
  - 140+ MT CO<sub>2</sub>e emissions
  - Includes bp retail and former refining assets
  - Corp HQ 21 companies including Sysco, Waste Management; United Airlines hub
- Zone 2: Dallas/Fort Worth
  - Focus in 2022
  - 125+ MT CO<sub>2</sub>e emissions
  - Corp HQ for 12 Fortune 500 companies inc. AT&T, Jacobs Engineering, T-Mobile, American Airlines and Southwest Air hubs
- Zone 3: San Antonio/Austin
  - Future potential
  - 115+ MT CO<sub>2</sub>e emissions
  - Corp HQ for Valero, Dell

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## Regional emission hub California: centers of city and corporate opportunities

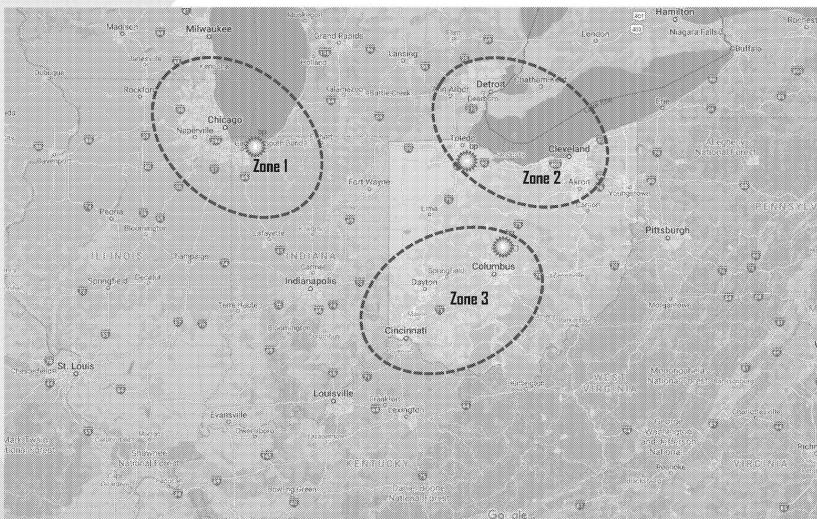


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- California is home to 53 Fortune 500 companies
- Zone 1: Los Angeles
  - Focus in 2021
  - 200+ MT CO2e emissions
  - Includes bp retail and former refining assets
  - Corporate HQ for AECOM Tech, Reliance Steel, A Mark Precious Metals; and 3 international/2 domestic airports (LAX owned by the City)
  - Two largest seaports in the North America managing 28%+ of market
- Zone 2: Bay Area
  - Focus in 2022
  - 50+ MT CO2e emissions
  - Corp HQ for Apple, Alphabet, Wells Fargo
- Zone 3: San Diego
  - Future potential
  - 50+ MT CO2e emissions
  - Corp HQ for Qualcomm, Valero

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## Regional emission hub Midwest



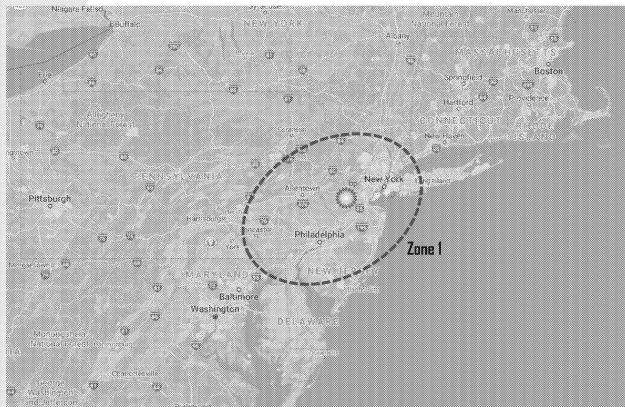
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- Zone 1
  - Focus in 2021
  - 160+ MT CO2e emissions
  - Includes Whiting refinery
  - United Airlines hub
- Zone 2
  - Focus in 2022
  - 170+ MT CO2e emissions
  - Includes Toledo refinery
  - Corp HQ for 8 Fortune 500 companies inc. General Motors, Ford, DowDuPont, Goodyear Tire, Owens Corning
- Zone 3
  - 70+ MT CO2e emissions
  - Corp HQ for 10 Fortune 500 companies inc. Kroger and Procter and Gamble

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## Regional emission hub NYC/Newark/Philadelphia



### Illustrative regions

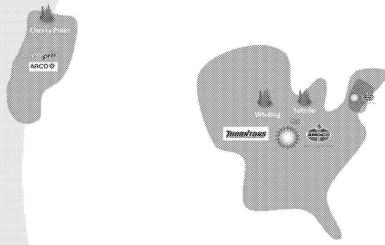
- Zone 1
  - Focus in 2021 (Corporates first)
  - 400+ MT CO2e emissions
  - Includes material M&T position
  - HQ for Castrol US
  - Corp HQ for 80 Fortune 500 companies inc. Verizon, Merck, Comcast, Johnson & Johnson, Avis
  - Third largest seaport in the US managing c.12% of North America market

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## Overlap of bp assets within focus zones

M&C Portfolio of Brands & Businesses



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bp capability within focus areas



| Priority Opportunity Zones | Natural Climate Solutions | Decarbonization of Mobility | Decarbonization of Infrastructure | Waste to Energy | CCUS | Hydrogen |
|----------------------------|---------------------------|-----------------------------|-----------------------------------|-----------------|------|----------|
| Northeast Zone             | ●                         | ●                           | ●                                 | ●               | ●    | ●        |
| California Zone            | ●                         | ●                           | ●                                 | ●               | ●    | ●        |
| Texas zone                 | ●                         | ●                           | ●                                 | ●               | ●    | ●        |
| Midwest Zone               | ●                         | ●                           | ●                                 | ●               | ●    | ●        |

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## Summary and Next Steps

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## The Integrated Picture



| Priority Opportunity Zones | Focus Cities (and engagement date)                             | Corporate Focus                    | Corporate Targets in 2021 & 2022   | Existing bp business   |
|----------------------------|--|------------------------------------|--|--|
| <b>Northeast Zone</b>      | Newark (2021)<br>*Philadelphia (2022)<br>*New York City (2022) | Consumer Goods & Heavy Transport   | <ul style="list-style-type: none"> <li>▪ Port Authority of NY/NJ</li> <li>▪ Verizon</li> <li>▪ Major banks</li> </ul>                                  | <ul style="list-style-type: none"> <li>▪ US Castrol HQ</li> <li>▪ TGS NY office</li> </ul> |
| <b>California Zone</b>     | *Los Angeles (2021)<br>*San Francisco (2022)                   | Consumer Goods & Heavy Transport   | <ul style="list-style-type: none"> <li>▪ Ports of LA and Long Beach</li> <li>▪ Airports of LA</li> <li>▪ Reliance Steel</li> </ul>                     |  |
| <b>Texas zone</b>          | *Houston (2020)<br>Dallas (2022)                               | Heavy Industries & Heavy Transport | <ul style="list-style-type: none"> <li>▪ United Airlines</li> <li>▪ Waste Management</li> <li>▪ Port of Houston</li> <li>▪ Houston airports</li> </ul> | Houston offices  |
| <b>Midwest Zone</b>        | *Chicago (2021)<br>Cleveland (2022)                            | Heavy Industries & Heavy Transport | <ul style="list-style-type: none"> <li>▪ Ford</li> <li>▪ Goodyear</li> <li>▪ Cleveland-Cliffs</li> </ul>   | Chicago offices: Whiting and Toledo refineries   |

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\*C40 cities

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## Next steps and enablers



- Clarify roles and responsibilities between RC&S and individual businesses.
- Establish US Business Development and Origination integration forum with cross-business representation.
- Finalize criteria for early-screening potential candidates.
- Pursue Federal and State expansion of Opportunity Zone policies to include "Low Carbon Opportunity Zones".
- Develop bp view of long-term technology themes in the US.
- Engage internal working group to define potential partnering/inorganic options to supplement bp capabilities.

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Back-up slides



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## Corporate emission reduction targets in the US

Table 2: List of Fortune Global 500 companies that have made a public commitment that they are, or will be, carbon neutral.

| Today  | Future   |
|--|--|
| <b>now</b>   |  |
| Achmea<br>Allianz<br>Alphabet<br>Australia & New Zealand Banking Group<br>BNP Paribas<br>Capital One Financial<br>Credit Suisse Group<br>Deutsche Bank<br>Goldman Sachs Group<br>ING Group<br>La Poste<br>MetLife<br>Microsoft<br>Munich Re Group<br>National Australia Bank<br>Swiss Re<br>Tokio Marine Holdings<br>Toronto-Dominion Bank<br>Zurich Insurance Group | <b>2020-2030</b><br>Bank of America Corp.<br>Bosch Group<br>L'Oréal  |
|  | <b>2035-2050</b><br>BT Group<br>Daimler<br>Verizon Communications  |
|  | <b>2022-2025</b><br>Coop Group<br>Morgan Stanley<br>Novartis<br>SAP  |
|  | <b>2030</b><br>E.ON<br>EHI<br>LG Electronics<br>Schneider Electric<br>Siemens<br>State Bank of India<br>Unilever |
| <b>US companies with carbon neutral commitment</b>   |  |

### Other major US companies with carbon reduction targets (less than carbon neutral)

- Xerox
- Whirlpool
- Walmart
- Union Pacific
- Port Authority of NY and NJ
- Kraft
- Heinz
- Hershey
- Coca Cola
- Starbucks
- Schlumberger
- Republic Services
- Procter & Gamble
- Pepsi
- Owens Corning
- McDonalds
- LA Dept of Water and Power
- HP
- Hilton
- HP
- General Mills
- Ford
- Dell
- CSX Corp
- Crown Holdings
- CVS Pharmacies
- Conagra
- Cisco
- Best Buy
- Ball Corp
- AMD

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## Proposed approach to identifying corporate candidates

Corporates in the US are being assessed within two broad categories: **federal players** and **opportunity zone players**

- **Federal players** hold a nationwide presence and opportunity, and the relationship with bp can be developed independent of a regional relationship, e.g.:
  - Microsoft
  - Amazon
  - FedEx
  - Delta
- **Opportunity zone players** hold primarily a regional presence and opportunity, and the relationship with bp can be developed or benefit from leveraging regional relationship, e.g.:
  - United (hubs in Houston, Chicago and Denver)
  - Goldman Sachs
  - Goodyear in Ohio where bp has a major refinery

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## What is an "Opportunity Zone"?

- Opportunity Zones give both individuals and corporations the chance to re-invest existing capital gains into Qualified Opportunity Zone Funds ("QOFs") in order to receive tax breaks for helping fund investment in impoverished areas.
- OZs are located in 8,700 communities across all 50 states and the 5 US territories, including 878 in California and 862 in Puerto Rico.
- There are over \$6 trillion in eligible capital gains within the US and \$300 billion of it has been earmarked for Opportunity Funds to date.
- The program provides three tax benefits for investing unrealized capital gains in Opportunity Zones:
  - **Temporary deferral of taxes on previously earned capital gains.** Investors can place existing assets with accumulated capital gains into Opportunity Funds. Those existing capital gains are not taxed until the end of 2026 or when the asset is disposed of.
  - **Basis step-up of previously earned capital gains invested.** For capital gains placed in Opportunity Funds for at least 5 years, investors' basis on the original investment increases by 10 percent. If invested for at least 7 years, investors' basis on the original investment increases by 15 percent.
  - **Permanent exclusion of taxable income on new gains.** For investments held for at least 10 years, investors pay no taxes on any capital gains produced through their investment in Opportunity Funds (the investment vehicle that invests in Opportunity Zones).

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## Partner screening criteria

- X
- Y
- Z



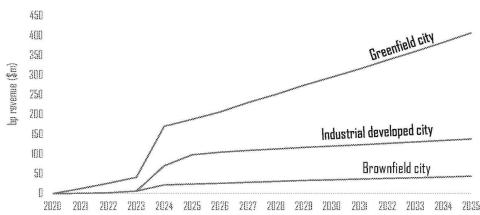
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## The value from integrated solutions for cities will depend on the archetype

### Cities - potential bp revenue range per integrated solution

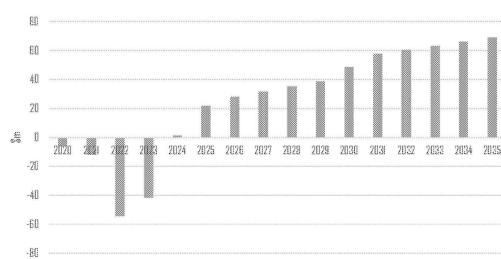


### Assumptions

- City population of ~2 million
- Scale and source of value differ by city archetype:
  - Industrial developed cities may include offers like CCUS, EV charging, solar energy, renewable natural gas, carbon offset natural gas (CONG), NCS and building efficiency solutions
  - Greenfield city solutions don't include CCUS but have scaled up assumptions for other offers

### Cities - pre-tax NPV by source of value & by stakeholder for an industrial developed city:

### Cities - pre-tax cashflow for an industrial developed city



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Integrated NPV: ~\$350m IRR: ~20%

Source of Value:

| Source       | NPV     |
|--------------|---------|
| Buildings    | NPV 60  |
| EV passenger | NPV 40  |
| Solar        | NPV 50  |
| CCUS         | NPV 110 |
| CONG         | NPV 40  |
| NCS          | NPV 10  |
| EV fleet     | NPV 20  |
| Waste        | NPV 20  |

Stakeholder:

| Stakeholder | NPV | Percentage |
|-------------|-----|------------|
| City        | 90  | 26%        |
| Private     | 130 | 37%        |
| Federal     | 130 | 37%        |

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## Corporate Targets



| Priority Opportunity Zones | Consumer Goods  | Heavy Transport  | Heavy Industries  |
|----------------------------|---|--|---|
| <b>Northeast Zone</b>      | <ul style="list-style-type: none"> <li>▪ Goldman Sachs</li> <li>▪ JP Morgan</li> <li>▪ Verizon</li> </ul> | <ul style="list-style-type: none"> <li>▪ Port Authority of NY/NJ</li> </ul>  | <ul style="list-style-type: none"> <li>▪ tbd</li> </ul>                                       |
| <b>California Zone</b>     | <ul style="list-style-type: none"> <li>▪ tbd</li> </ul>   | <ul style="list-style-type: none"> <li>▪ Ports of LA and Long Beach</li> <li>▪ Airports of LA</li> </ul>                   | <ul style="list-style-type: none"> <li>▪ Reliance Steel</li> </ul>                            |
| <b>Texas zone</b>          | <ul style="list-style-type: none"> <li>▪ Waste Management</li> </ul>                                      | <ul style="list-style-type: none"> <li>▪ United Airlines</li> <li>▪ Port of Houston</li> <li>▪ Houston airports</li> </ul> | <ul style="list-style-type: none"> <li>▪ tbd</li> </ul>                                       |
| <b>Midwest Zone</b>        | <ul style="list-style-type: none"> <li>▪ Goodyear</li> </ul>  | <ul style="list-style-type: none"> <li>▪ tbd</li> </ul>  | <ul style="list-style-type: none"> <li>▪ Owens Corning</li> <li>▪ Cleveland-Cliffs</li> </ul> |

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## City Targets



Priority Cities 2021

Debt rating

Economic health indicator

Public commitments to net zero

Chicago

Los Angeles

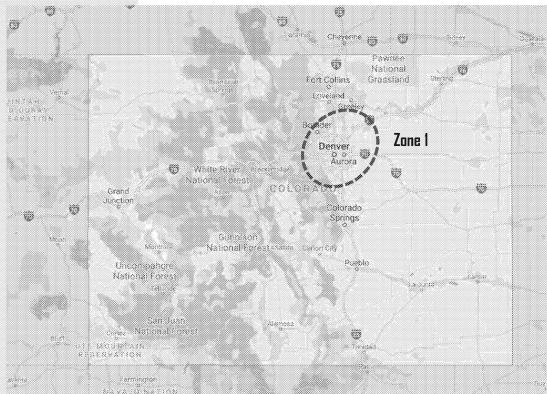
Newark

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## Regional emission hub Colorado

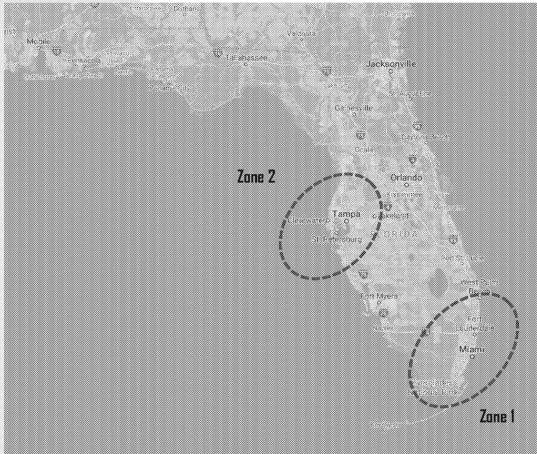


### Illustrative regions

- Zone I: Denver
  - 130+ MT CO<sub>2</sub>e emissions
  - Headquarters to BPX
  - Corporate headquarters to Arrow Electronics, McKesson, Newpont Mining; major hub for United airlines; one major international airport

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## Regional emission hub Florida



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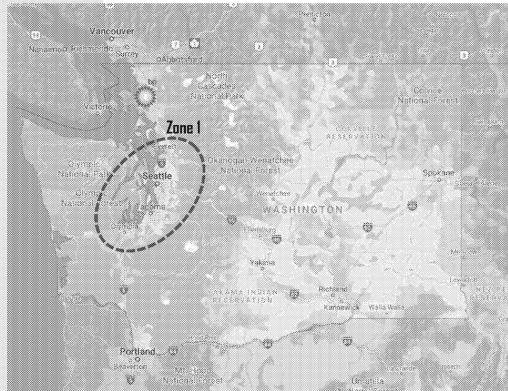
### Illustrative regions

- Zone 1: Miami
  - 90+ MT CO<sub>2</sub>e emissions
  - Proximity to [bp asset]
  - Corporate headquarters to Office Depot and World Fuel Services; one international airport and 16<sup>th</sup> largest seaport in North America
- Zone 2: Tampa Bay
  - 65+ MT CO<sub>2</sub>e emissions
  - Proximity to [bp asset]
  - Corporate headquarters to Publix Supermarkets, Jabil, and Tech Data Corp; one major airport

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## Regional emission hub: Washington



### Illustrative regions

#### • Zone 1

- 70+ MT CO2e emissions
- Proximity to Cherry Point refinery
- Major corporate presence by Microsoft, Starbucks, Boeing, Alaska Airlines and Costco
- One international airport and one major seaport managing c.5% of North America market

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