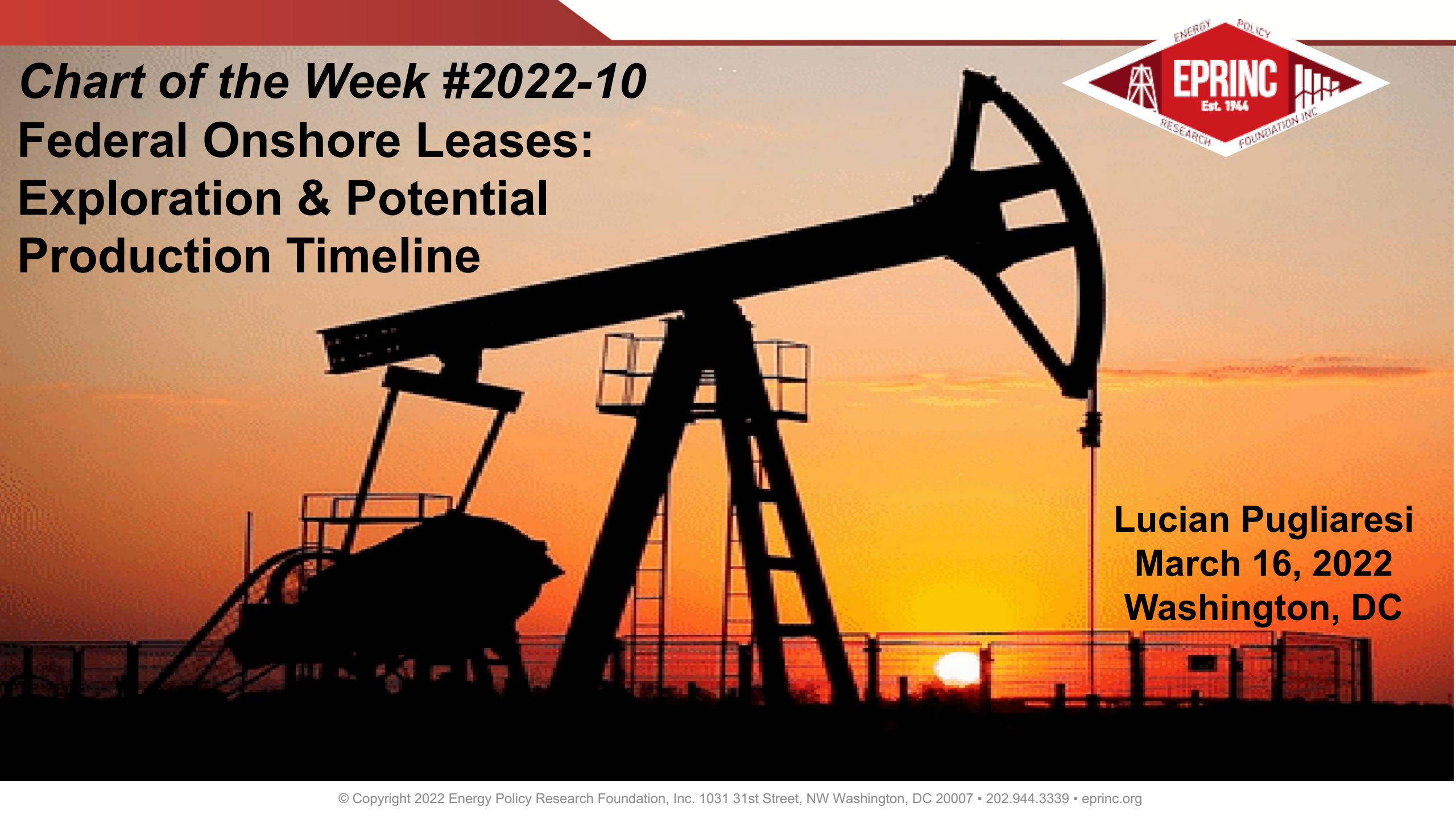




Chart of the Week #2022-10

Federal Onshore Leases: Exploration & Potential Production Timeline

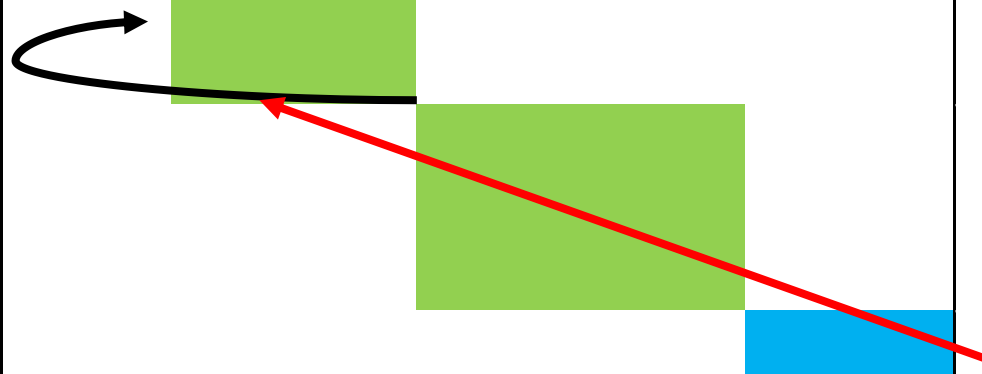


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Washington, DC**

Federal Onshore Leases - Exploration & Potential Production Timeline

| Cost (\$millions) | | | | Activity | Lease Year | | | | | | | | | | | | | | | | |
|-------------------|---------|----------------|-----------------|--|------------|----|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Low | High | Cumulative Low | Cumulative High | | -2 | -1 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 2 | 10 | 2 | 10 | Evaluate preliminary seismic data, identify potential lease candidates, nominate lands | [Blue] | | | | | | | | | | | | | | | | |
| 1 | 5 | 3 | 15 | Lease Sale | | | [Red] | [Red] | [Red] | [Red] | [Red] | [Red] | [Red] | [Red] | [Red] | [Red] | [Red] | [Red] | [Red] | [Red] | [Red] |
| 1 | 5 | 4 | 20 | High-bid lease won (10 year term) | | | | [Red] | [Red] | [Red] | [Red] | [Red] | [Red] | [Red] | [Red] | [Red] | [Red] | [Red] | [Red] | [Red] | [Red] |
| 11 | 21 | 15 | 41 | Acquire refined seismic data, fulfill environmental and regulatory analysis to obtain Federal drilling permit, contract rigs, drill exploration wells. | | | | [Green] | [Green] | [Green] | [Green] | [Green] | [Green] | [Green] | [Green] | [Green] | [Green] | [Green] | [Green] | [Green] | [Green] |
| 6 | 13 | 21 | 54 | Evaluate results; if positive, define future work, prepare NEPA; file development permits; wait for approvals. | | | | | | | | | | | | | | | | | |
| \$500 | \$3,000 | \$521 | \$3,054 | Build facility, drill and begin production. | | | | | | | | | | | | | | | | [Blue] | [Blue] |

| Legend | |
|------------------------|---------|
| Pre-Leasing Evaluation | [Blue] |
| Lease Term | [Red] |
| Exploration Phase | [Green] |
| Development Phase | [Blue] |



If the exploration wells are unsuccessful, the process needs to be restarted.

Analysis based on Western Energy Alliance Data

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Federal Onshore Leases - Exploration & Potential Production Timeline



- In the current period of high energy prices, the U.S. Presidential administration, as well as some Congressional legislators, have been reluctant to bolster policies in order to facilitate more energy production in the U.S., especially on Federal lands. Key to their rationale is that oil & natural gas producers already hold 9,000 permits on Federal lands.
- Holding permits does not guarantee the immediate availability of energy resources. Rather, the acquisition of a permit is only the beginning of a time-consuming process.
- Once acquired, permit-holders need to refine their seismic investigations, perform environmental and regulatory analysis to obtain Federal drilling permits, contract rigs, and then drill exploration wells. On average, this takes four years and costs between \$11 and \$21 million.
- If exploration wells are unsuccessful, the process needs to be restarted.
- If successful, future work needs to be defined, NEPA reviews need to be prepared, additional development permit requests need to be submitted. Combined, the reviews and permitting can add another seven years before production begins, and additional costs ranging between \$6 and \$13 million.
- This slide deck is available at: <https://eprinc.org/chart-of-the-week/>
- For more information on this chart, please contact Lucian Pugliaresi (loup@eprinc.org).