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NECEC'S DEP PERMIT:
Perspective from Industrial Energy Consumer Group (IECG)

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Who is IECG?

Maine incorporated association formed in 1985.

Represents Maine industrial energy consumers and consumer-generators before regulatory, legislative, and congressional bodies on energy issues.

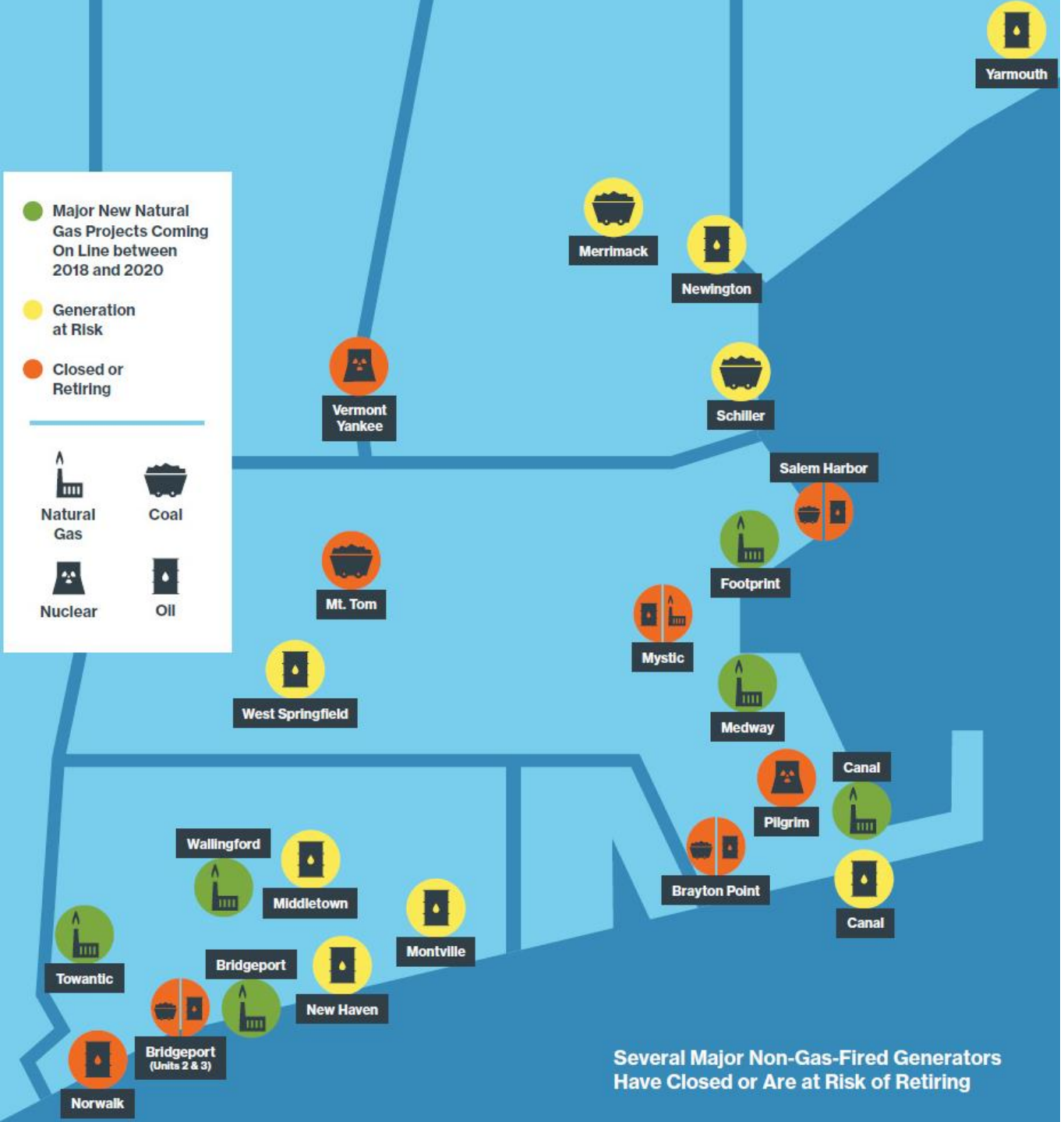
Participation in hundreds of proceedings affecting the price, diversity, origins, reliability, and effects of Maine energy supplies.

More often than not IECG is opposed to CMP.

E.g., net metering, Maine Power Reliability Project

A very proactive industrial energy user group

See www.getmaineclimateright.com



Why Does IECG Care About NECEC?

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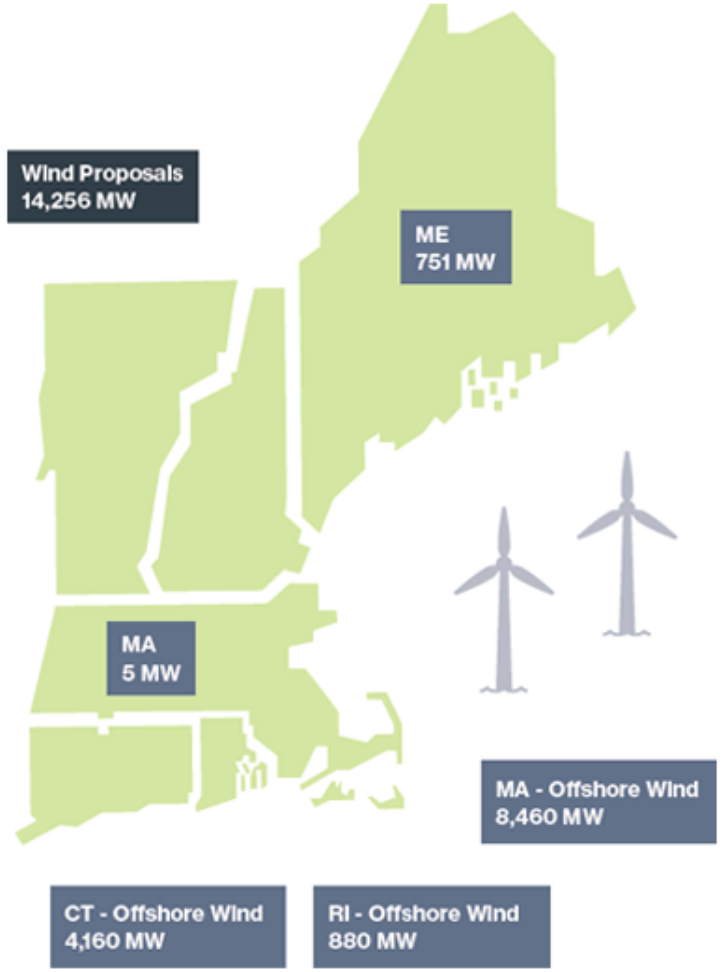
By State

- 54% MA (11,243 MW)
- 27% CT (5,591 MW)
- 10% ME (1,988 MW)
- 7% RI (1,453 MW)
- 2% NH (506 MW)
- 1% VT (145 MW)

By Type

- 68% Wind (14,256 MW)
- 15% Solar (3,211 MW)
- 11% Battery Storage (2,265 MW)
- 5% Natural Gas (1,037 MW)
- <1% Hydro (71 MW)
- <1% Nuclear (37 MW)
- <1% Fuel Cell (25 MW)
- <1% Biomass (24 MW)



Source: ISO Generator Interconnection Queue (January 2020); FERC and Non-FERC Jurisdictional Proposals; Nameplate Capacity Ratings

Note: Some natural gas proposals include dual-fuel units (with oil backup). Some natural gas, wind, and solar proposals include battery storage.

IECG's Climate Strategy:

Our Principles.

01.

Prudence requires acting on consensus climate science.

02.

Prudence also requires taking the most cost-effective actions first. We call this "Biggest Climate Bang for the Buck" (BCB2). BCB2 eliminates GHG emissions fastest and most efficiently.

03.

Prudence relies upon careful analysis and thoughtful economic planning of how to achieve our climate goals. With great care, reducing GHG emissions can be done without destructive controversy. To this end, we will cooperate with all serious parties.

04.

Analysis and economic planning must include necessary changes and investment in electric utilities. Strategic beneficial electrification, the gradual reduction in fossil fuel use by increased reliance on renewable electricity from an expanded grid, is the superior climate mitigation strategy available.

05.

The burdens of reducing GHG emissions must also be shared proportionately among all fossil fuel uses. So far, the burdens have fallen disproportionately on electricity consumers. This is not only economically inefficient, but will perversely frustrate Maine's ability to meet its GHG emission reduction mandates.

06.

Climate success must include the participation of all possible sources, at every level of society. Let's diversify and innovate in reducing GHG emissions.

Affordability and Reliability: Foundations to Decarbonization

6. Beneficial Electrification of Transportation and Heating to Decarbonize

Decarbonizing the economy requires the electrification of fossil fuel uses, especially transportation and heating, because electricity is the only scalable resource that can power society through zero-carbon resources, like wind and solar. To meet increased demand, the electric grid will need to expand to 3 to 5 times its current size. For electrification to be beneficial and in the public interest, it will be crucial to maintain reasonably low prices and high reliability so that the transition from fossil fuels to clean electricity takes place at the scale and pace necessary to address climate change.[13]

+ **Do heat pumps reduce GHG emissions?**
+ **Emissions benefits of heat pumps increase over time.**
+ **Do EVs reduce GHG emissions?**

NECEC Environmental Permitting in Maine

Two Agencies

- Department of Environmental Protection (DEP)
- Land Use Planning Commission (LUPC)

Two Statutes

- Natural Resources Protection Act (NRPA)
- Site Location of Development Act (SLODA)

The Statutory Basics

NRPA

DEP "shall grant a permit when it finds that the applicant has demonstrated that the proposed activity meets the standards …"

SLODA

DEP "shall approve a development proposal whenever it finds the following …"

Review stds are essentially reasonableness stds: *no unreasonable harm/impact.*

Tension: human benefits vs enviro protection

- Impacts
- Reasonable impacts
- Not unreasonable impacts

NRPA
38 M.R.S. §480-D

Most contentious standards for NECEC:

(1) Existing Uses. (hearing topic)

activity will not unreasonably interfere with existing scenic, aesthetic, recreational or navigational uses.

(3) Harm to Habitats; fisheries. (hearing topic)

activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine or marine fisheries or other aquatic life.

- Includes assessment of practicable alternatives
- Includes mitigation/compensation: avoid, minimize, mitigate, compensate

SLODA
38 M.R.S. § 484

Most contentious standard for NECEC:

(3) No adverse effect on the natural environment. (hearing topic)

adequate provision for fitting the development harmoniously into the existing natural environment

&

development will not adversely affect existing uses, scenic character, air quality, water quality or other natural resources in the municipality or in neighboring municipalities.

NECEC DEP Process

(10/13/17)

Application for NRPA and SLODA permits accepted

(11/17/17)

Commissioner determined there will be a public hearing

(7/19/18)

Intervention petitions filed

(8/13/18)

22 intervenors consolidated into 10 groups; public hearing topics confined to 4 “contentious” topics

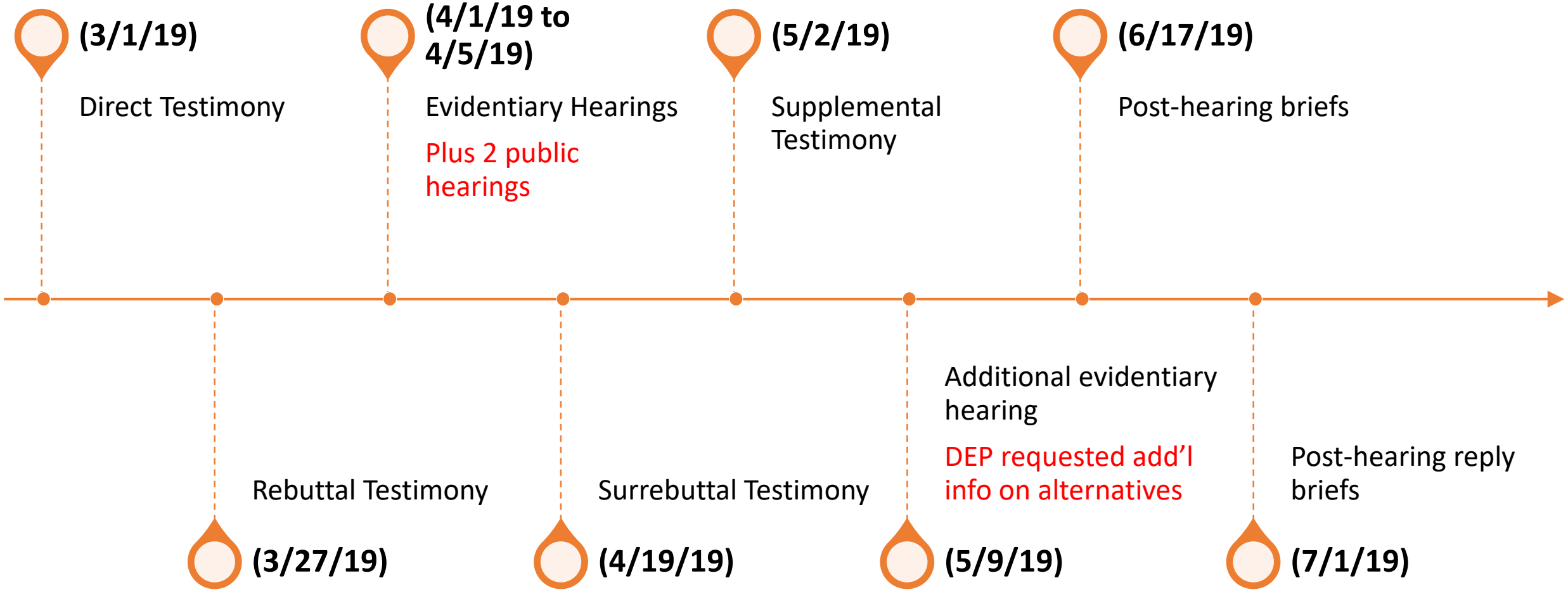
- Scenic Character and Existing Uses
- Wildlife Habitat and Fisheries
- Alternatives Analysis
- Compensation and Mitigation

(10/19/18)

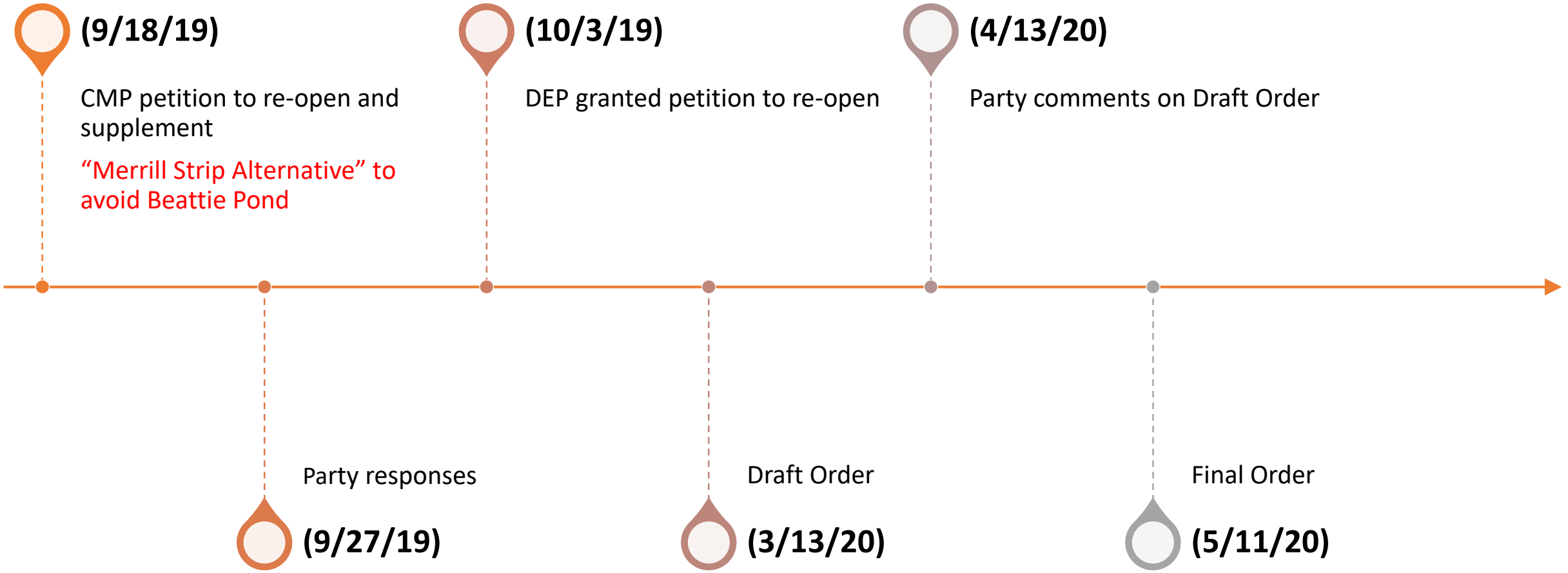
CMP application amendment

HDD under the Kennebec River

DEP Process, Cont'd



DEP Process, Cont'd (Again)



IECG's Position & Arguments

Limitations on what IECG could argue:

- Language of statute & regs
- Narrow scope of hearing topics
- Consolidation into Group 3 (w/ Maine Chamber, Lewiston, IBEW, L-A Chamber)

General arguments/themes:

- Reasonableness stds (per Law Court) require balancing benefits against impacts to determine if impacts are unreasonable and extent.
- Substantial energy benefits make impacts more reasonable or less unreasonable.
- Undergrounding is not a "practicable alternative."
- "Perfect" is not the std: regulatory process designed to improve projects thru agency/party expertise, testing evidence.
- Mitigating climate change is a benefit to weigh in determining reasonableness of harms, but full accounting of global GHG impacts not required.

IECG's Position & Arguments, Cont'd

Direct testimony (Glenn Poole) on energy benefits stricken as outside scope of hearing topics, so became "public comments."

Surrebuttal testimony by Gil Paquette re impacts and impracticability of undergrounding.

Supplemental testimony by Gil Paquette re impacts of taller structures, undergrounding, construction techniques, etc.

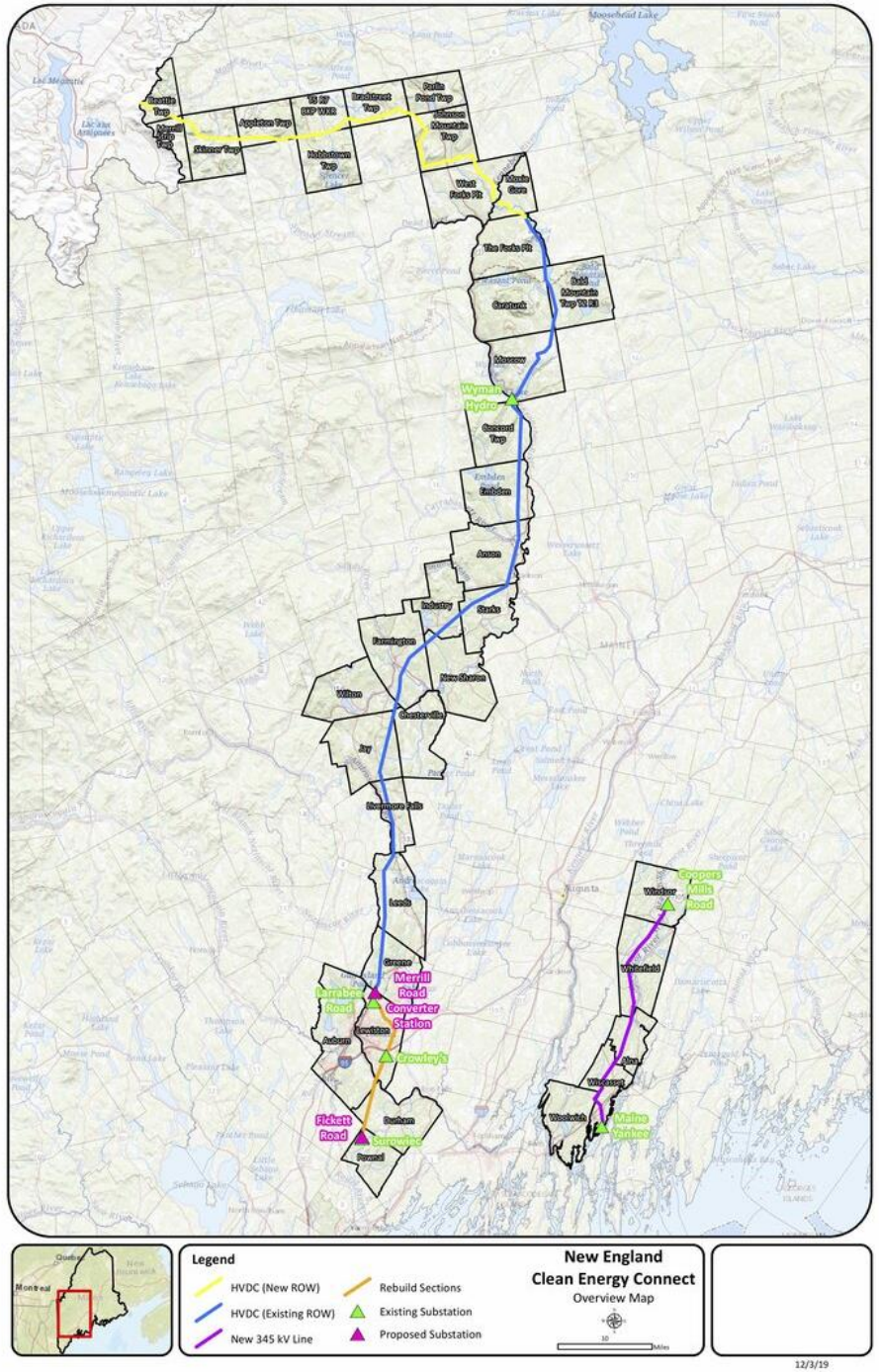
DEP Order Approving NECEC

Substantial impacts avoided/minimized "by imposing a set of conditions identified and developed through the public process."

"Conditions provide an unprecedented level of natural resource protection."

"Project purpose" = provide renewable electricity

DEP "applied the statutes and regulations it administers in this Order to approve the least environmentally damaging alternative available to achieve that purpose. … So conditioned, the project fully satisfies the Department's permitting standards."



Focus on Segment 1

- 53 miles (yellow line) from Canadian border to the Forks.
- The only section of <u>new</u> corridor.
- Remainder of NECEC is co-located in existing transmission corridors.

Scenic Impact – No Unreasonable Adverse Effect (UAE)

"[T]he two laws … allow development or activity that will result in a visual impact, but when this impact is too great an applicant fails to satisfy the review criteria."

A very granular, feature-by-feature analysis, e.g.,:

No UAE:

- **Upper Kennebec River**: change from overhead to HDD.
- **Beattie Pond**: Merrill Strip Alternative avoided Beattie Pond.

No UAE if CMP meets conditions, e.g.:

- **Coburn Mtn & Rock Pnd**: (1) add'l tapering and (2) non-specular wire.
- **Old Canada Rd**: vegetative buffers crossing Johnson Mtn. Twp and in Moscow.
- **Moxie Strm**: (1) 35-ft vegetation w/in 100 feet and (2) non-specular wire.
- **AT**: (1) non-specular wire; (2) vegetative buffer along Troutdale Rd.; and (3) shorter poles along Moxie Pond.

Practicable Alternatives: LEDPA

- “two notable modifications”
- “Both … reflect the value of the permit review process and the potential for projects to evolve during this process.”

Practicable Alternatives: Undergrounding

- Despite “intuitive appeal” DEP found “that constructing the line underground, outside of the Upper Kennebec River crossing, is not a less damaging practicable alternative.”
- How/why?

Figure 10-Oversized Reel Transport, 4,724 feet of 230kV Cable

Corridor Impacts: Tapering & Taller Vegetation

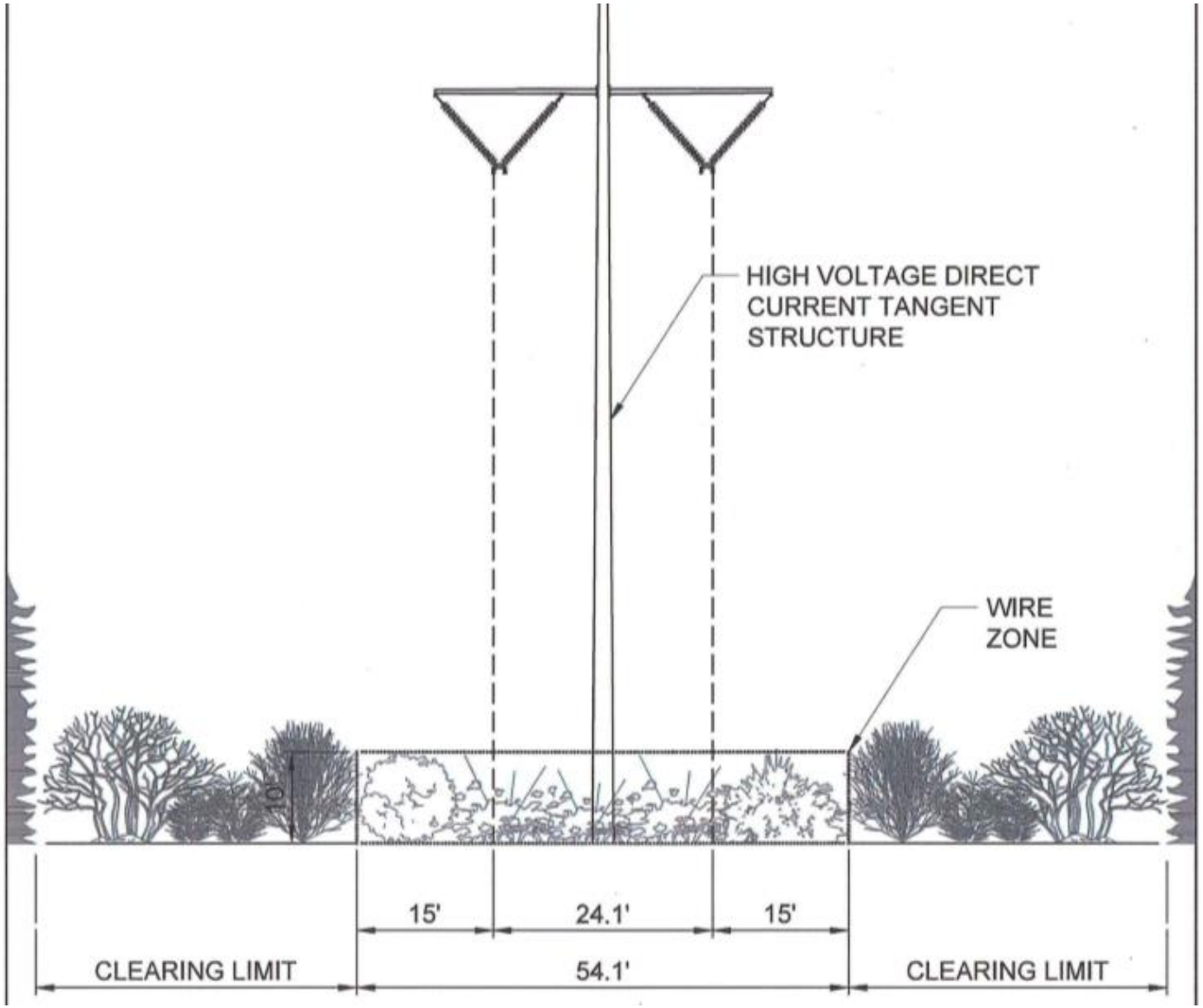
CMP must:

- maintain tapered vegetation … along the entire Segment 1 corridor
- except where CMP must maintain
  - full height canopy vegetation,
  - a minimum height of 35 feet, or
  - taller vegetation managed for deer travel corridors.”

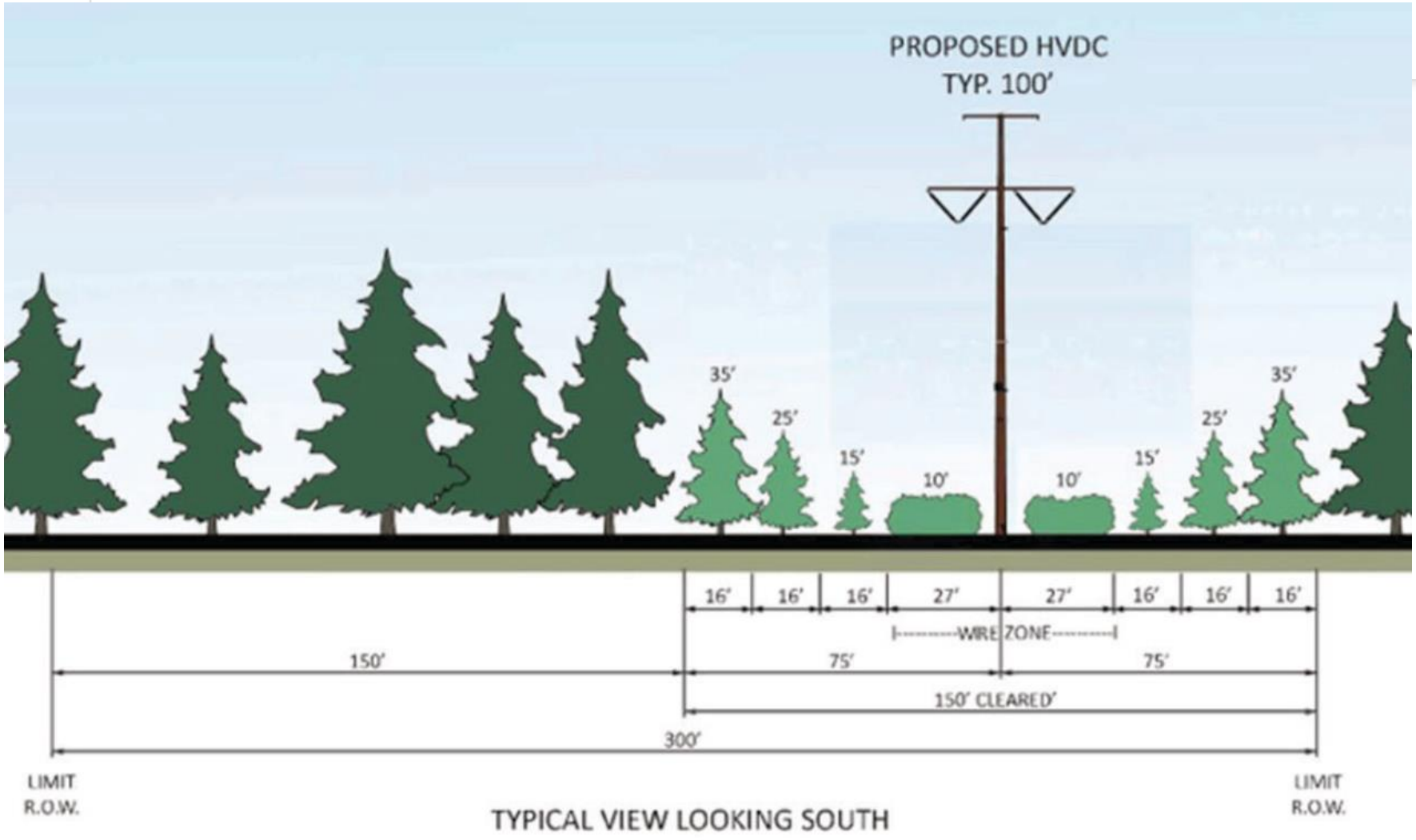
The “Wire Zone”

- Cleared, then scrub/shrub (≤ 10 feet) for safety & operations.
- Original proposal: clear and maintain 150-foot corridor as scrub/shrub.
- Then, per DEP consultation, limited tapering to reduce visual impacts.
- Then, per DIFW consultation, some add’l tapering to reduce habitat impact for deer.

Now …….?



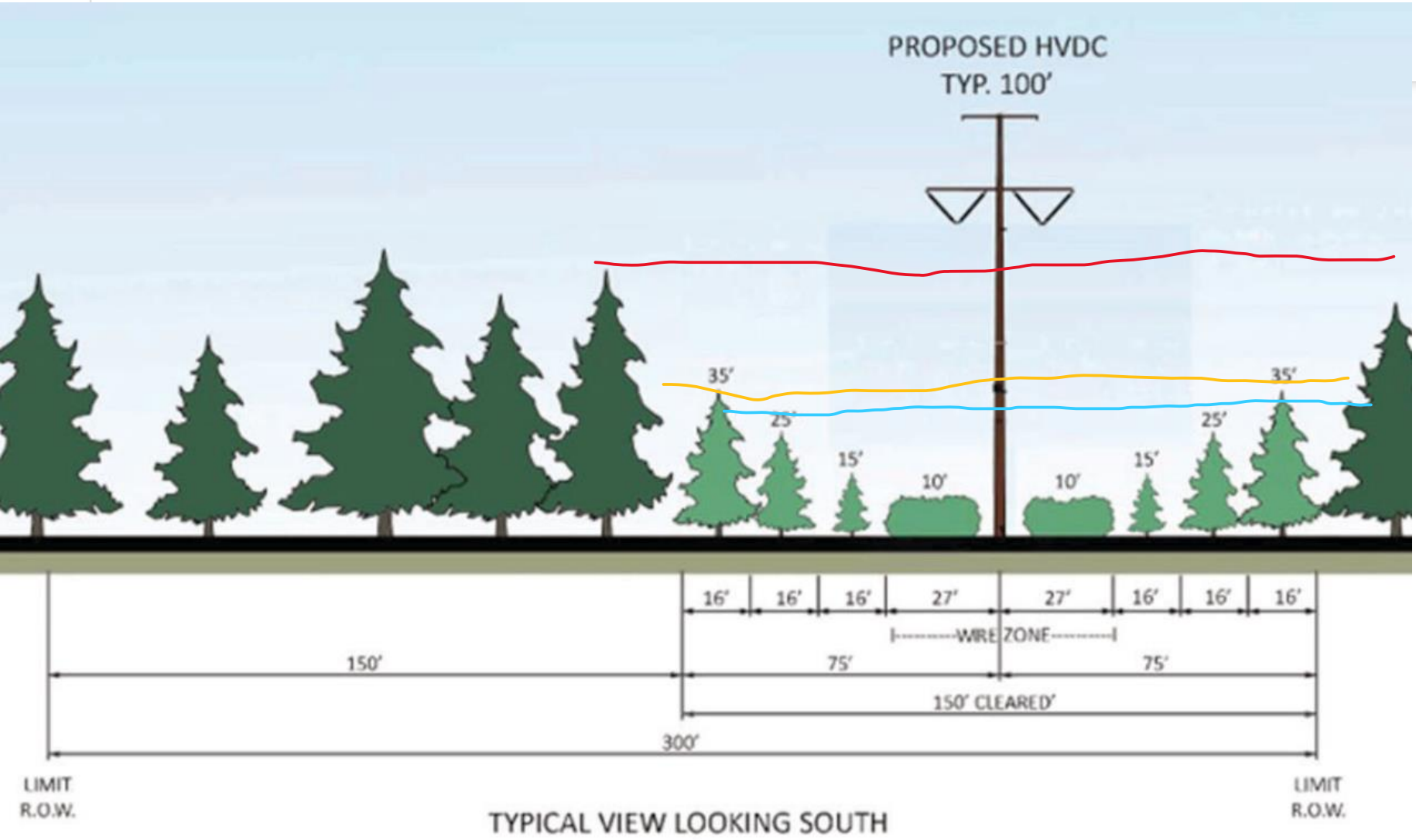
Tapering Required



- For all of Segment 1 (unless taller vegetation)
- Mechanical maintenance (no chemicals)
- Only wire zone (54 feet) is cleared, then maintained as scrub/shrub. On either side of wire zone:
- 1st taper for 16 feet (15-foot vegetation)
- 2nd taper for 16 feet (25-foot vegetation)
- 3rd taper for 16 feet (35-foot vegetation)

Tapers selectively cut & managed.

Full-height or Taller Vegetation Required



- For 14.1 (26%) of 53.1 miles
- Generally need taller structures (trade-off)
- Full-height in 3 Wildlife Areas
- Min. 35-foot in 9 Wildlife Areas
- Softwood corridors (25–35 feet) in 4 areas for deer

Additional Compensation

Even with tapering and taller vegetation, DEP "finds additional, off-site, mitigation … is required"

"CMP must … permanently conserve 40,000 acres in the vicinity of Segment 1."

Bottom line:

(Tapering + Taller + Conservation) finally = not unreasonable impacts

Climate Change

- NRPA/SLODA do not "require … any particular showing regarding a project's impact on global climate change." Ch. 375, §2 deals with highly localized climate impacts (e.g., fog, humidity, smog caused by Wyman Station).
- BUT … DEP "considers a project's purpose ["provide clean, renewable energy"] … in evaluating whether the totality of its adverse environmental effects is reasonable."
- DEP found w/r/t climate change:
  - "single greatest threat to Maine's natural environment"
  - Negative and worsening effect on brook trout habitat
  - Threatens forest habitat for moose, pine marten
  - "Failure to take immediate action to mitigate [] GHG emissions … will exacerbate these impacts"
- DEP "accepts the PUC's finding … and weighs the NECEC project's reductions in GHG emissions against the project's other impacts in its reasonableness determination."
- DEP ultimately found: "the adverse effects to be reasonable in light of the project purpose and its GHG benefits"

Climate Change

NECEC = immediate mitigation of “greatest threat to Maine’s natural environment” (already impacting brook trout, moose, pine marten, etc.)

Yet … an “unprecedented level” of conditions

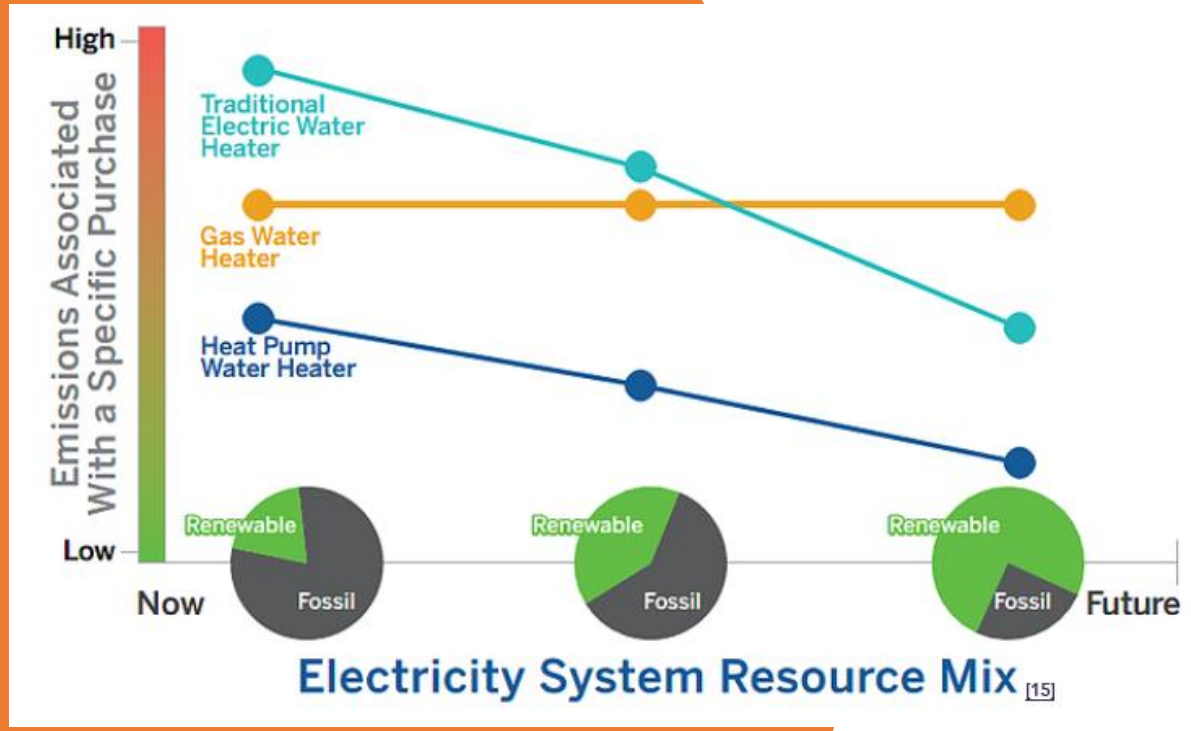
What does it mean for permitting climate solutions?

Offshore wind, large-scale solar, etc. are big infrastructure requiring transmission lines.	Beneficial electrification requires major grid expansion (3-5x)	More conditions = increased project costs = beneficial electrification harder	What about the risk of having permits overturned by referendum?

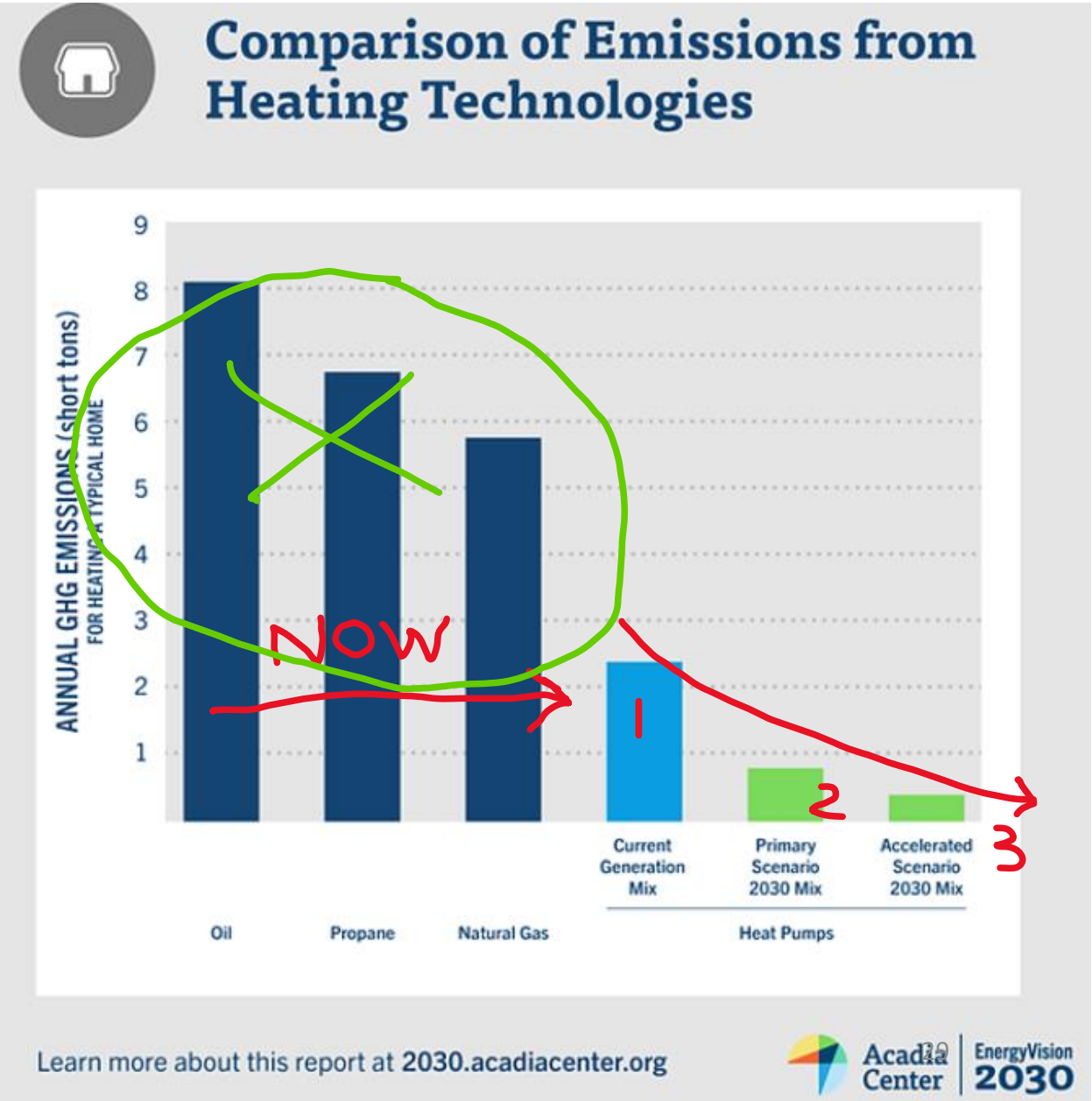
NECEC is a Climate Solution

- Can endlessly debate GHG "leakage" versus in-region GHG reductions → climate paralysis.
  - GHGs don't respect geopolitical boundaries. Maine can only control Maine. Cannot police NY, then OH, then CA, then China…
- NECEC will lower costs and increase reliability → foundation for beneficial electrification.
- Replacing oil furnaces and gasoline cars with heat pumps and EVs will increase the importance of electricity → must be affordable and reliable for people to switch.

Immediate GHG Reductions, Increasing Over Time



NECEC is a climate solution because its helps Maine get to #1 (immediate GHG reductions), then sets Maine up to affordably and reliably progress to #2 and #3.



Thank You

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