

Energy Facility Siting Council

Solar PV Facilities
Rulemaking Advisory
Committee Meeting #1

Salem
Aug 30, 2018



Photo credit: cablinginstall.com

AGENDA

1. Introductions and Format
2. Scope of Rulemaking
3. Purpose of Meeting
4. Background information
5. Question 1: Whether multiple non-EFSC jurisdictional solar PV facilities could aggregate to be functionally equivalent to an EFSC jurisdictional facility?
6. Question 2: If yes to Question 1 (above), what objective criteria could apply?
7. Question 3: Should specific standards apply to solar PV facilities?
8. Public Comment
9. Wrap Up and Next Meeting

INTRODUCTIONS AND FORMAT

1. Rulemaking Advisory Committee Introductions

- Name
- Organization
- Interests

2. Format

- Seeking input
- Tent cards and “electronic” tent cards
- Notes and recording

SCOPE OF RULEMAKING

Within the Scope of this Rulemaking

1. Question 1: Whether multiple non-EFSC jurisdictional solar PV facilities could aggregate to be functionally equivalent to an EFSC jurisdictional facility?
2. Question 2: If yes to Question 1, what objective criteria could apply?
3. Question 3: Should specific standards apply to solar PV facilities?

SCOPE OF RULEMAKING – CONT'D

Outside of the Scope of this Rulemaking:

1. Statutory thresholds – ORS 469.300(11)(a)(D)
2. Single Energy Facility beyond Solar PV
3. Land Conservation and Development Solar PV Rules

LCDC Rulemaking

- Temporary rulemaking
- OAR 660-033-0130(38)
- Rulemaking Advisory Committee

PURPOSE OF MEETINGS

1. Meeting #1 - Salem
 - Ensure all RAC members have same background information
 - Field questions for Department consideration
 - Initiate a discussion
2. Meeting #2 – Prineville
 - Specific discussion re: ownership, proximity, operation, trigger for review, review process, potential solar specific standards
3. Meeting #3 - Boardman
 - Review draft language
4. Meeting #4 - ???

Background Information

“15 questions” related to wind facilities

1. Information gathering – not rule or policy
2. Categories of questions
 - Ownership
 - Proximity
 - Shared infrastructure
 - Shared operation and maintenance
 - Shared power contracts and marketing
 - Shared financing

Background Information

Oregon Natural Desert Association Petition for Rulemaking

1. Add definition for “single energy facility” related to wind, solar and geothermal
2. Anyone seeking a CUP for a renewable energy project had to get EFSC determination that it was not within EFSC jurisdiction
3. Ten specifically identified circumstances
4. Any three of the ten specifically identified circumstances resulted in multiple local jurisdictional projects being a single energy facility



Background Information

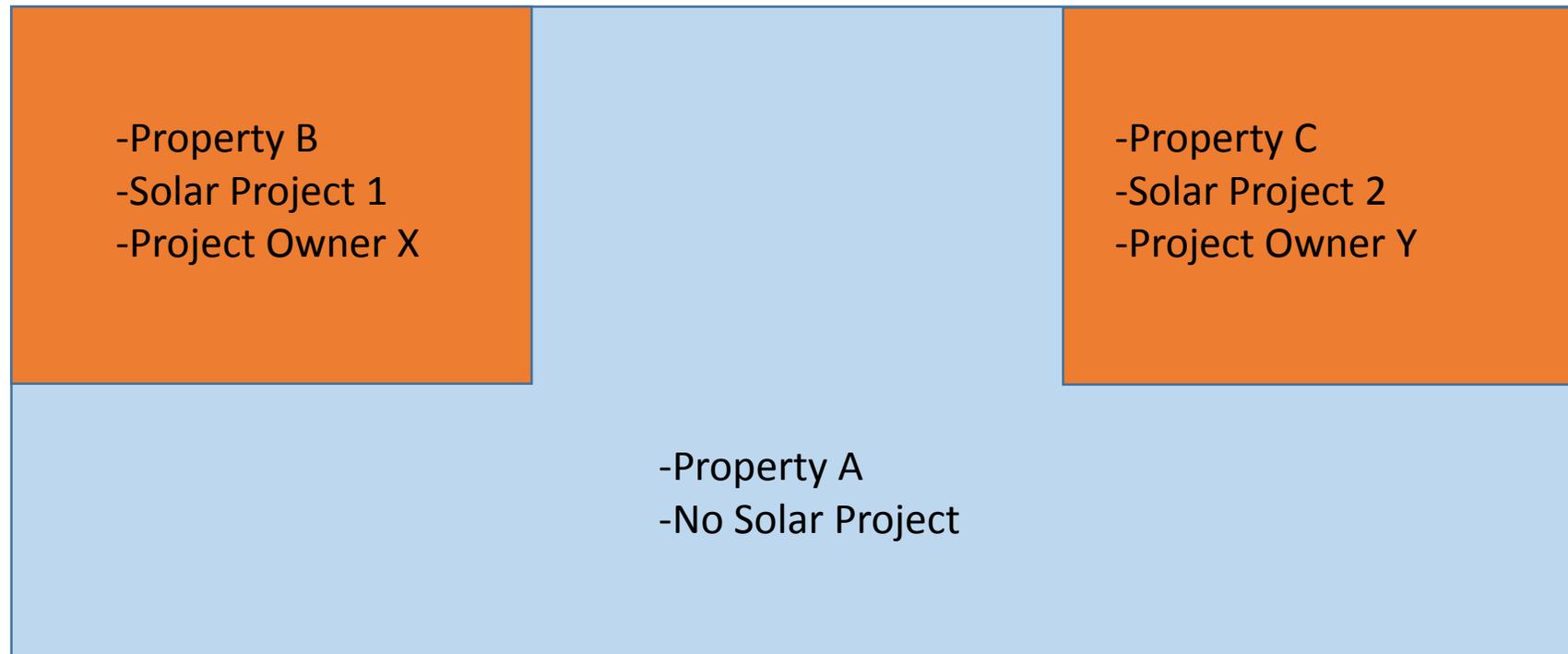
LCDC “Photovoltaic solar power generation facility” definition – OAR 660-033-130(38)(e)

****For purposes of applying the acreage standards [Goal 3 exception standards] of this section, a photovoltaic solar power generation facility includes all existing and proposed facilities on a single tract, as well as any existing and proposed facilities determined to be under common ownership on lands with fewer than 1320 feet of separation from the tract on which the new facility is proposed to be sited. Projects connected to the same parent company or individuals shall be considered to be in common ownership, regardless of the operating business structure.****

Background Information

LCDC “Photovoltaic solar power generation facility” definition – OAR 660-033-130(38)(e)

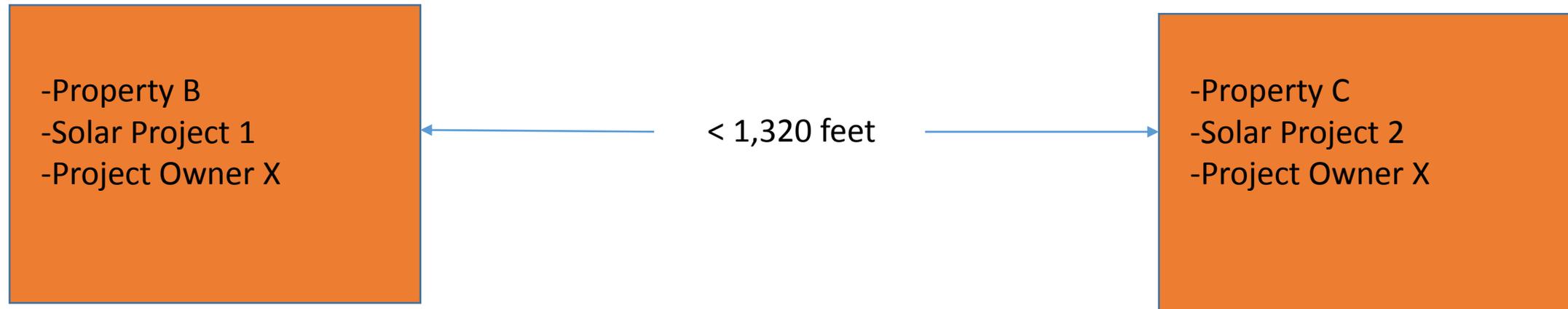
“Tract Criterion” – Three properties, one property owner, two project owners



Background Information

LCDC “Photovoltaic solar power generation facility” definition – OAR 660-033-130(38)(e)

“1,320 foot Criterion” – two projects, one company owner, two property owners



Background Information

Energy Generation Area Rules – OAR 345-001-0200 through 0220

1. EFSC establishes geographic boundary for wind, solar or geothermal
2. EFSC Review Trigger
 - between 3 and 35 MW average generating capacity; and
 - connected to a common switching station or maintained or operated in common; and
 - are in common project ownership
3. All projects that trigger this threshold must apply for exemption
4. Umatilla County – Wind – 1999 - 2009

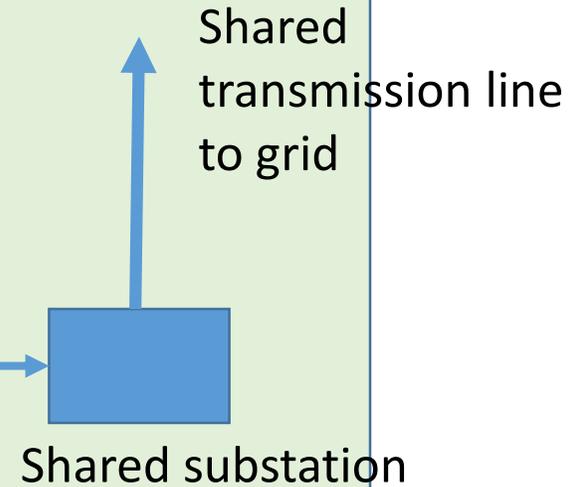
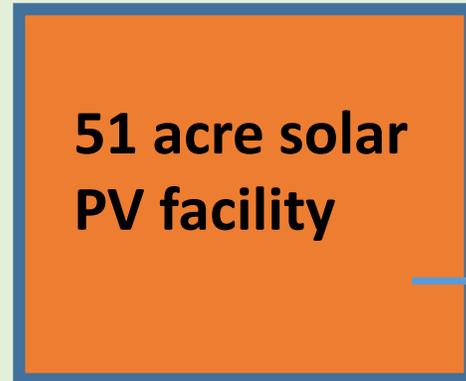
Question # 1

Whether multiple non-EFSC jurisdictional solar PV facilities could aggregate to be functionally equivalent to an EFSC jurisdictional facility?

Examples

Ex. A

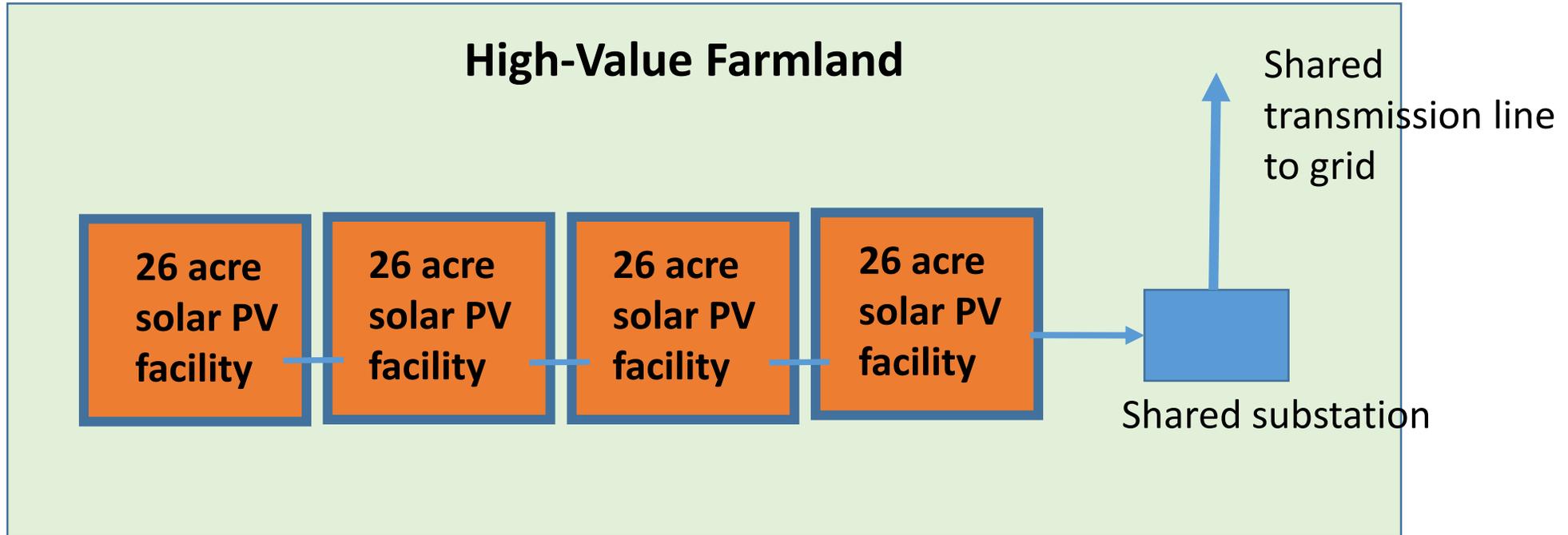
High-Value Farmland



Owned by same parent company
Permitted six months apart
Adjacent facilities

Examples

Ex. B



Owned by same parent company
Permitted six months apart
Adjacent facilities

Question #2

If Question #1 is answered affirmatively, develop new rules that identify objective criteria for determining the circumstances of when multiple non-EFSC jurisdictional solar PV facilities functionally aggregate to the size of an EFSC jurisdictional solar PV facility

- Ownership? (ultimate parent company)
- Proximity of solar arrays? Proximity of related or supporting facility components?
- Operational considerations?
- Timing of permitting or construction?

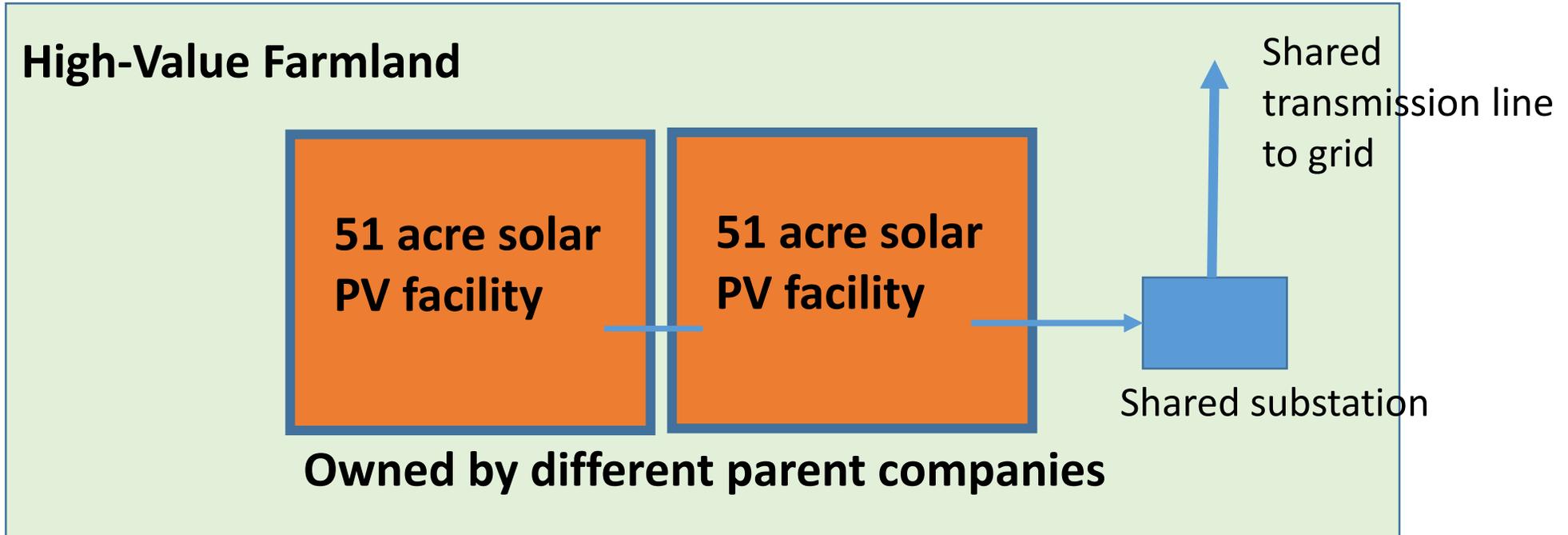
- Current thinking: a definition rule would be developed in OAR 345, Div 1.

Considerations

- Ownership? (ultimate parent company)
- Can two or more solar facilities, adjacent or in close proximity, owned by **different companies**, be considered as a “single” energy facility for purposes of EFSC permitting?

Examples

Ex. C

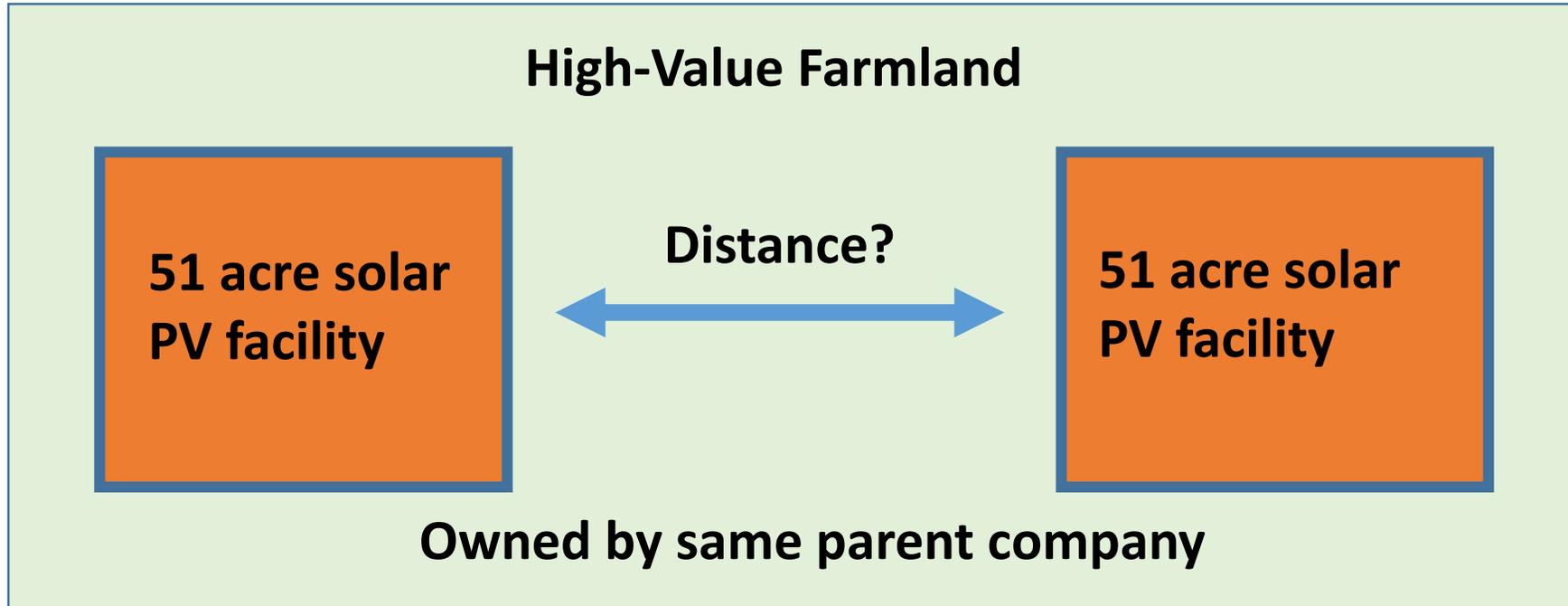


Considerations

- Proximity of solar arrays? Proximity of related or supporting facility components? How far, and from what features?
- LCDC Definition of “photovoltaic solar power generation facility” at OAR 660-033-0130(38)(e) includes facilities “under common ownership on lands with fewer than 1320 feet of separation from the tract on which the new facility is proposed to be sited.”

Examples

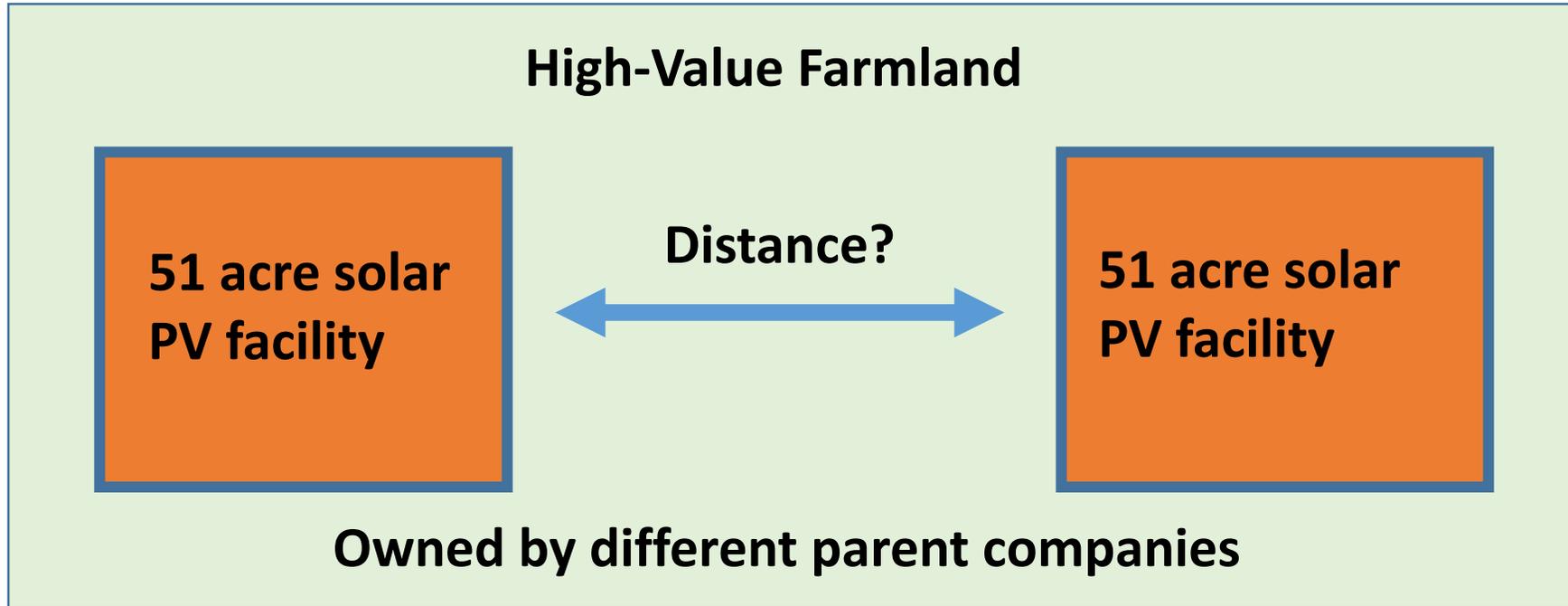
Ex. D



- Distance from solar arrays?
- Distance from related or supporting facility components?
- Tracts?
- Distance from tracts on which facilities located? (LCDC rule)

Examples

Ex. E

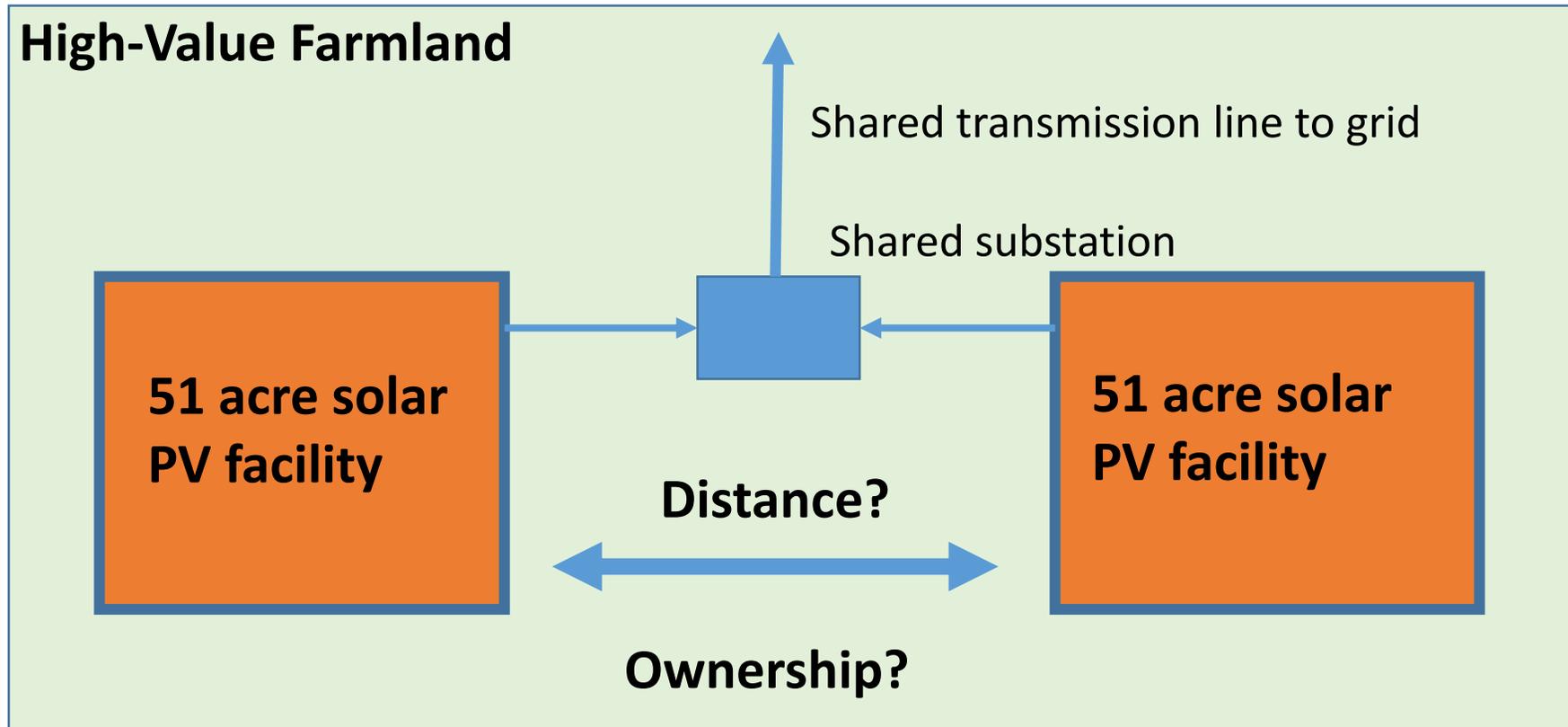


- Distance from solar arrays?
- Distance from related or supporting facility components?
- Tracts?
- Distance from tracts on which facilities located? (LCDC rule)

Considerations

- Operational considerations?
- Shared facility components?

Ex. F

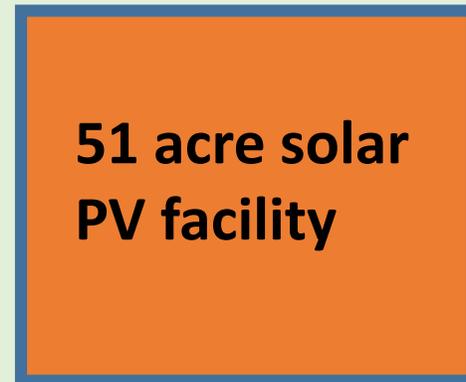


Considerations

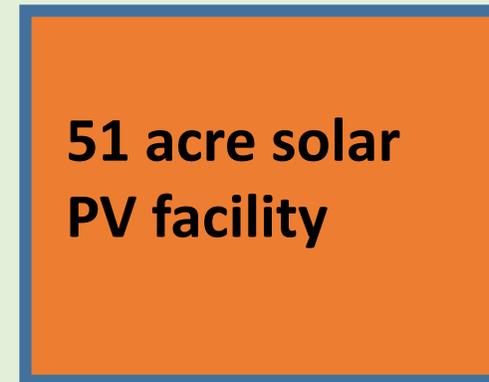
- Timing of permitting or construction?
 - Time between permit applications?
 - Time between facility construction?

Ex. G

High-Value Farmland



Built in 2018



Permit ap 202X?

Ownership?

Considerations

- What else?

Question #3

Should specific standards apply to solar PV facilities?

- Toxicity and Safe Disposal
- Glare and Glint
- Wildlife
- Heat Island Effect

Topics selected for initial discussion:

- Prior displays of public interest
- Department's knowledge of risks

Literature review includes:

- Local, state, federal, and international statutes & regulatory codes.
- Model ordinances
- Peer reviewed journals
- News articles

Toxicity and Safe Disposal

- Solar PV panels may be hazardous waste
 - Not listed under RCRA
 - Must be evaluated on a case-by-case basis
- Washington
 - Interim policy classifies solar PV as electrical waste, thereby lessening handling and transportation requirements
 - RCW 70.355.0101 requires a “stewardship plan”:
 - Financing
 - Recycling (85% by weight)
 - Acceptance of all panels in Washington
- California
 - Rulemaking to classify solar PV as “universal” hazardous waste
 - Legislative Counsel’s Digest of Senate Bill notes that intent is to “ensure the recovery and recycling” of solar PV panels and to reduce the likelihood of disposal in landfills.

Glare and Glint

- FAA indicates that an average solar PV panel may cause glare or glint
- Relevant factors:
 - Percent of sunlight reflected
 - Specular or diffuse reflection
 - Angle of sun
- FAA SGHAT tool
- Few jurisdictions impose regulations relating to glare
- At least one model ordinance advises against regulating glare
- Literature suggest that greatest concern relates to solar thermal technology, not solar PV

Wildlife

- Direct Impact
 - Fatalities
- Indirect Impact
 - Habitat loss
 - Species displacement could result in death or interaction with agricultural lands
- Importance of habitat “connectivity”
- Birds
 - Solar PV may cause a “lake effect”
 - Limited empirical evidence evaluates the severity of impacts to avian species (US DOE)

Heat Island Effect

- Issue raised by public in relating to alfalfa farming
- Few studies examine solar PV heat island effect
- One empirical study noted that ambient temperature increased by 3-4 degrees at night
- Study conducted in Arizona, in desert environment
- Literature suggests that heat dissipates at approximately 100 feet

Public Comment

1. In Room
2. On the Phone

Wrap Up & Next Meeting

1. Date
2. Location
3. Agenda