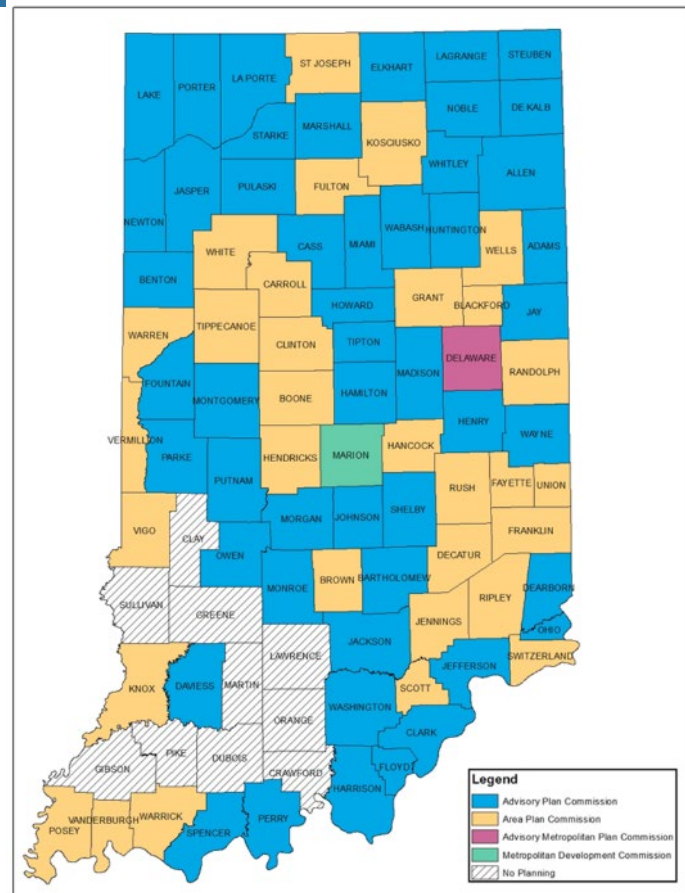# INDIANA *RENEWABLE ENERGY*

## Siting through Technical Engagement and Planning (R-STEP™)

## Local Planning and Permitting

# The Role of Planning in Communities

*In community planning we are always balancing private property rights with regulated uses for the health, safety and general welfare of the community.*

# The Planning Team

## Plan Commission

- Prepare comprehensive plan
- Make recommendations on zoning and subdivision control ordinances
- Approve development plans and subdivisions of land
- Manage enforcement

## Board of Zoning Appeals (BZA)

- Quasi-judicial board
- Rule on variance from development standards
- Rule on special exceptions
- Hear appeals of staff administrative positions

The **legislative bodies** adopt the comprehensive plans, ordinances and any amendments.

# Renewable Energy Planning
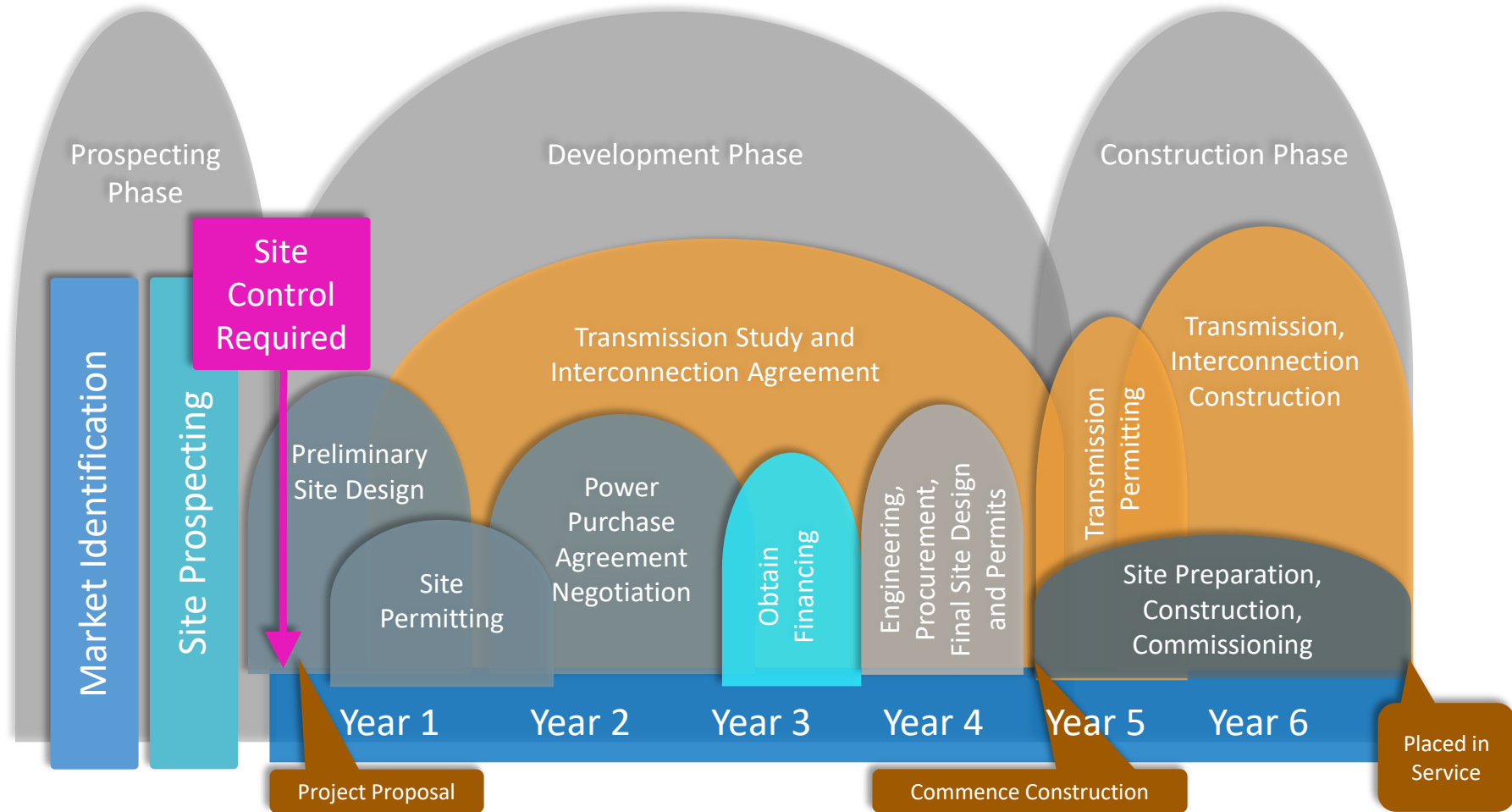
**Hypothetical Utility-Scale PV Development Timeline (250 MW)**

# Out of 82 counties that have adopted a zoning ordinance

- 51 had commercial wind land use regulations*
- 46 had with commercial solar land use regulations

*8 counties did not permit wind in any district



Legend:
- Solar and Wind
- Solar
- Wind
- Wind not permitted

**PURDUE UNIVERSITY** | Extension - Community Development

A Snapshot of Renewable Energy Land Use Regulations in

## Benton County

| | |
|---|---|
| **Farmland Coverage** 96.50% land in farms | **Population (2020)** 8,719 ↔ |
| **Population Density** 21.5 per sq. mi. | **County Type** Rural |
| **Housing Unit Density** 9.3 per sq. mi. | **PCPI (2019)** $42,135 |

### COMMERCIAL SOLAR ENERGY SYSTEM STANDARDS

Use standards for CWECSs beyond zoning district's standards unless otherwise specified.

| ZONING DISTRICT | PERMITTED USE / SPECIAL EXCEPTION |
|---|---|
| All districts except residential | Special Exception |

REZONE REQ: NO   ADDITIONAL PROCESSES: NONE

**DEFINITION**
Convert and deliver electricity to a utilities transmission lines

### SETBACKS & BUFFERS

| | |
|---|---|
| Setback | 75' from ROW |
| Municipal Buffer | None |
| Use Buffer | 200' from primary dwelling |
| Reciprocal Buffer (CM) | None |

### OTHER DEVELOPMENTAL STANDARDS

| | |
|---|---|
| Minimum Lot Size | 5 acres |
| Maximum Height | 35' |
| Noise Limit | 41-75 dB depending on hertz |
| Ground Cover Standards | None |
| Color Standards | None |
| Signage/Warnings Standards | Yes |
| Fencing Standards | Yes |
| Landscaping/Screening Standards | Yes |
| Glare Standards | Yes |
| Other Standards | None |

### PLANS & STUDIES REQUIRED

* Upon request

- ☒ Decommission Plan
- ☒ Economic Development Agreement
- ☒ Maintenance Plan
- ☒ Transportation/Road Use Plan
- ☐ Vegetation/Landscape Plan
- ☐ Environmental Assessment
- ☐ Emergency/Fire Safety Plan
- ☒ Drainage/Erosion Control Plan
- ☐ Liability Insurance
- ☐ Property Value Guarantee
- ☐ Certificate of Design Compliance
- ☒ Other plans or studies
  - Sound study

---

### COMMERCIAL WIND ENERGY CONVERSION SYSTEM STANDARDS

Use standards for CWECSs beyond zoning district's standards unless otherwise specified.

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**DEFINITION**
Wind energy conversion system that delivers electricity to a utility's transmission lines.

### SETBACKS & BUFFERS

| | |
|---|---|
| Setback | 350' or 2.2 times the tower height |
| Municipal Buffer | 1500' |
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### OTHER DEVELOPMENTAL STANDARDS

| | |
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| Shadow Flicker | None |
| Braking System Standards | Yes |
| Color Standards | Yes |
| Warnings/Hazard Protection Standards | None |
| Fence/Climb Prevention Standards | Yes |
| Lighting Standards | None |
| Interference | Yes |
| Other Standards | None |

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### COUNTY CONTACT INFORMATION

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|---|---|
| Name | Matt Hull |
| Role | Building Commissioner |
| Phone | (765) 884-1728 |
| Email | mhull@bentoncounty.in.gov |
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Sea Grant ILLINOIS-INDIANA

PURDUE UNIVERSITY Extension

Land Uses can be permitted in a zoning district

- By right
- By right with additional use standards
- By special exception
- Not permitted

<br>

- If a use is not permitted in a particular district, it might require an amendment to the zoning map or (rezoning to be allowed.)
- Overlay districts*

- A property that may be allowed under specified conditions.
- Intended for site-specific review
- Board of Zoning Appeals rules
  - Still needs to meet all district and use standards unless asking for variance
  - BZA may impose reasonable conditions
  - BZA may also require written commitments

- Indiana Code does not specify any set criteria
- Sometimes special criteria is confused with the variance criteria set by the state
- Communities often set general criteria for considering special exceptions
- Can also set use specific criteria
- Criteria should be used to create findings of fact for decision

PURDUE UNIVERSITY | Extension - Community Development

**IN R-STEP**

## A Snapshot of Renewable Energy Land Use Regulations in

# Benton County

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| ZONING DISTRICT | PERMITTED USE / SPECIAL EXCEPTION |
|---|---|
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REZONE REQ: NO   ADDITIONAL PROCESSES: NONE

**DEFINITION**
Convert and deliver electricity to a utilities transmission lines

#### SETBACKS & BUFFERS

| | |
|---|---|
| Setback | 75' from ROW |
| Municipal Buffer | None |
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#### OTHER DEVELOPMENTAL STANDARDS

| | |
|---|---|
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| Maximum Height | 35' |
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| Ground Cover Standards | None |
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### COMMERCIAL WIND ENERGY CONVERSION SYSTEM STANDARDS

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**Sea Grant** ILLINOIS-INDIANA

**PURDUE UNIVERSITY** Extension

| Description | Number of Ordinances | Range (ft) | Median (ft) | Mean (ft) |
|---|---|---|---|---|
| Residences | 20 | 100-660 | 200 | 255.5 |

*Other common use buffers include churches, schools (n=6)*

| Description | Number of Ordinances | Range (ft) | Median (ft) | Mean (ft) |
|---|---|---|---|---|
| Setback (Property Line) | 21 | 25-330 | 50 | 93.5 |
| Setback (ROW) | 9 | 30-150 | 100 | 93.3 |

# Commercial Wind Buffers

| Description | Number of Ordinances | Range (ft)* | Median (ft)* | Mean (ft)* |
|---|---|---|---|---|
| Residences | 25 | 640-3,960 | 1,000 | 1,384 |
| Municipality | 20 | 1,500-10,560 | 2,070 | 3,390 |
| Public Conservation Land | 11 | 600-5,280 | 750 | 1,397 |
| Schools | 11 | 660-10,560 | 1,500 | 3,096 |

*Many wind ordinance use a factor multiplied by total tower height for buffers and setbacks. This table reflects buffers for a total tower height of 600'.  The tallest towers in Indiana currently operation are 591' according to USGS.

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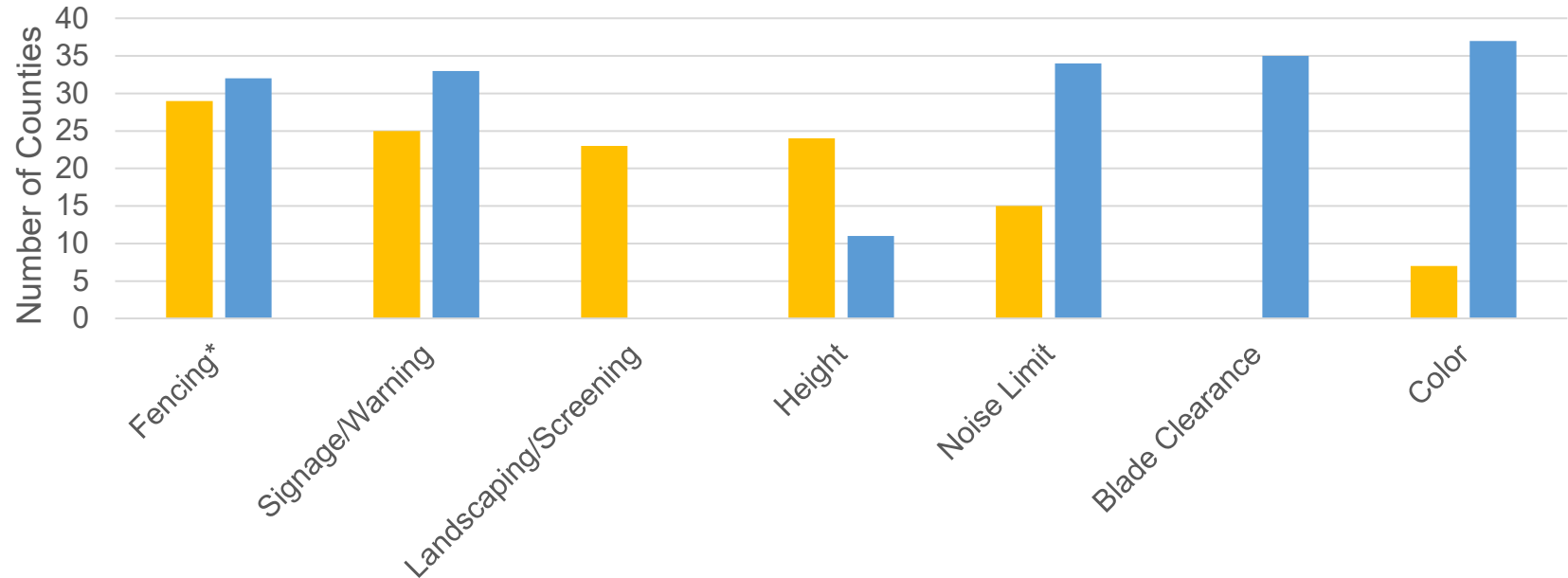
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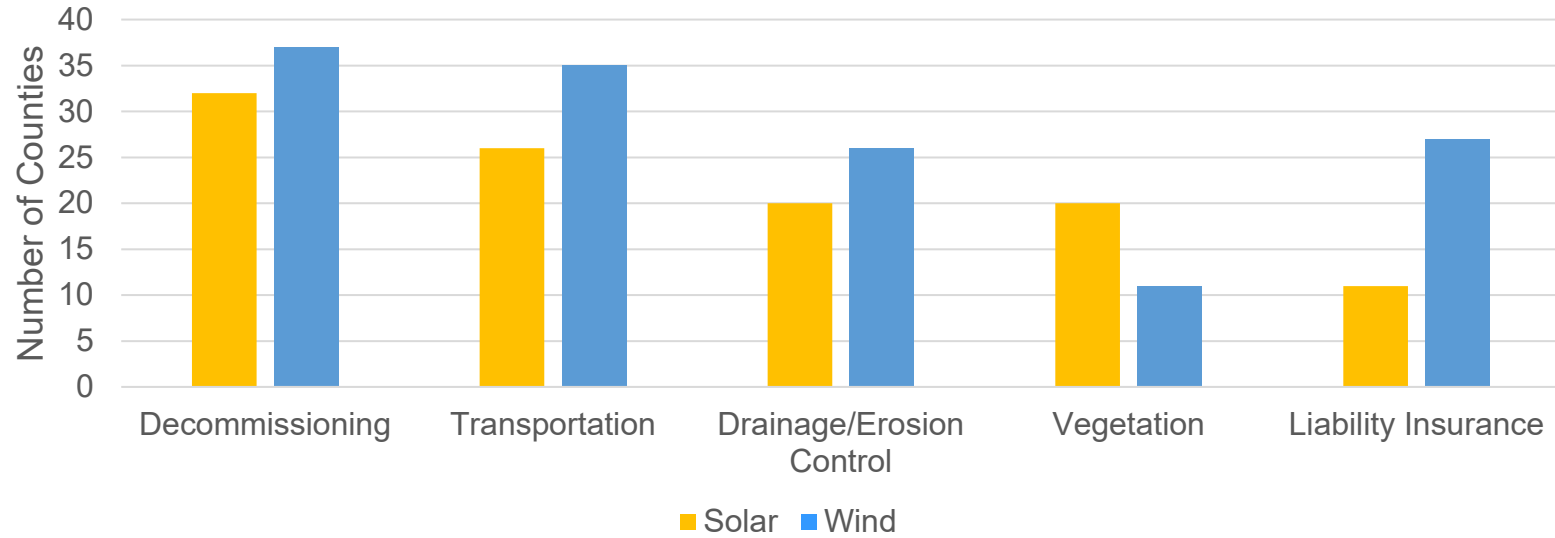- [ ] Other plans or studies

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Sea Grant ILLINOIS-INDIANA

PURDUE UNIVERSITY Extension

Other Renewable Energy Land Use Standards

*Includes climb prevention standards for wind

Plans Required for Commercial Renewable Energy Development

# Ordinance Inventory Update

- Ordinance inventory currently being updated
  - Adding battery energy storage systems
- Survey to Plan directors is wrapping up
- What are we expecting
  - More counties with wind/solar ordinances
  - Several counties with amendments since 2021
  - More land use moratoria

- SB 411 (2021) Established standards for a community to be considered wind energy or solar energy ready
- Communities can set less restrictive standards
- Currently no financial incentives are tied to the designation
- HB 1278 (2024) provided some flexibility in standards for this program.

# Voluntary State Standards

## Wind

- setbacks and maximum height
- shadow flicker
- signal interference
- sound level limitations
- wind turbine light mitigation technology;
- drainage repair
- decommissioning

## Solar

- setbacks, height, and buffers
- ground cover
- fencing
- underground cables and aboveground infrastructure
- glare minimization
- signal interference
- sound level limitations
- drainage repair
- decommissioning, abandonment, and "force majeure event"

**PURDUE UNIVERSITY** | Extension - Community Development

- HB 1628 (2025) Did not pass committee
    - An amendment would have allowed utility-scale projects to move jurisdiction to IURC under certain conditions (i.e. less productive soil, acreage cap for county, etc.)

- Michigan
    - New law grants permitting authority to the state unless local government adopts "compatible renewable energy ordinances" Incentive to still pursue local permitting.

- Ohio
    - State siting, but gives local representation on siting board and allows county to designate "restricted areas."

- Illinois
    - Cannot have more restrictive standards than the state

- Wisconsin
    - Anything over 100 MW is under state permitting jurisdiction

**PURDUE UNIVERSITY** | Extension - Community Development

- **Comprehensive Plan Goals and Objectives**
  - What goals will these developments support
  - What goals will they conflict with

- **Conflicting Land Uses**
  - What are the primary concerns or issues
  - What tools/standards would help to alleviate these conflicts

- **Public Infrastructure and Investment**
  - How do these developments add to public infrastructure and investment
  - What measures need to be put in place to protect or remediate public infrastructure

- **Externalities**
  - What are the positive or negative externalities of these developments

**Tamara Ogle**, Community Development Regional Educator

togle@purdue.edu