Memo on Renewable Energy Facilities
January 15, 2021

To: Planning & Zoning Commission

From: Timothy Huey, Planning & Development Director

Date: January 15, 2021

Re: Discussion of Enacting Regulations to Address Utility Scale Renewable Energy Facilities

Enacting regulations for utility scale wind and solar electric generation facilities would require both Comprehensive Plan amendments and Zoning Ordinance amendments. Currently the Scott County Comprehensive Plan does encourage clean, renewable and efficient energy. But consideration should be given to adopt policies to address the numerous issues and impacts of the development of both wind and solar facilities. Currently the Zoning Ordinance addresses large wind generators (turbines with capacity greater than 100KW) as a Special Permitted Use in both A-P and A-G. Utility scale solar facilities have not been addressed. Individual solar panels that generate electricity for a house or buildings have been determined to be a permitted accessory use or an ag exempt accessory use to a farming operation. Small wind generators (less than 100KW capacity) are a permitted use in A-P and A-G and Special Permitted Use in R-1.

For a background and context overview of utility-scale solar technology and trends, staff have included as enclosures:"Planning for Utility-Scale Solar Energy Facilities" by the American Planning Association; "Siting Utility-Scale Solar and Wind in Iowa – A Guide for Local Governments" by the Great Plains Institute.

Issues and impacts to be considered and addressed by both Comp Plan & Zoning Ordinance amendments:

- <u>Ag Production and Ag Preservation</u>
  The Comp Plan Land Use Policies would need to address the impacts of such solar electric generating projects on the productivity of the soil in the location they are being installed. Possible zoning ordinance requirements or conditions to preserve the soil and reduce erosion through cover crops, native prairie or other environmentally sound and beneficial practices could be included in the new regulations.

- <u>Concentration of facilities</u>
  The density, separation distances and property line setbacks for both wind turbines and solar panels should be addressed. Each type of generator likely would call for different standards, where the minimum separation of wind turbines may be established so that they are dispersed across the landscape, the maximum separation distance for solar panel be established to ensure the maximum utilization of ag land within the minimal area required.

- <u>Construction, maintenance and decommissioning of facilities</u>
  The impacts on County roads would need to be addressed at all three stages of the development and operation of both wind and solar facilities. The staging of construction and temporary storage of materials should be addressed. The monitoring of maintenance and methods to keep the facilities operating and appropriately maintained could be

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included in any regulations. The type of surety and allowance for inflation for the decommissioning of such facilities should be required.

- Environmental issues
  Storm water management, erosion control, turbine noise and flicker, snow drifting caused by solar panels and other impacts of such facilities should be addressed.

- Visual impacts
  While not much can be done to "screen" large wind turbines the same is not the case for solar panels. Fencing, landscaping, lightening and other visual impacts of solar facilities can be addressed.

Special Use or Floating Overlay District

As stated above wind turbines are currently address as a Special Permitted use while solar farms are not addressed at all. Because the impacts of these facilities both actual and perceived can generate significant response from neighboring property owners and others, consideration should be given to address solar farms with a floating zone. This allows the Planning Commission to review and recommend on all applications and final approval to rest with the Board of Supervisors. If they are reviewed as a Special Permitted Use once the regulations are adopted the decision on location and conditions is up to the Zoning Board of Adjustment. If a Utility Scale Renewable Energy floating zone was created it could address both wind and solar facilities. It would be used similar to the Ag Commercial Service floating zone and a determination of the appropriateness of a particular location could be made and the conditions and requirements for approval could put in place.

In reviewing the current Industrial Floating Zone staff would submit that it could be used to address solar farms. With the appropriate Comp Plan addendums and amendments to the I-F regulations to specifically address solar farms if could be used to permit the review of solar farms.

Finally, if the Planning Commission unanimously and unequivocally thinks that consideration of any regulations to allow solar farms in A-P zoned areas is contrary to our ag preservation policies we should identify that early on without expending a lot of effort on regulations that would not be adopted.

Case Study: Louisa County

Louisa County is the site of a rural Wapello solar farm. The 100-megawatt utility scale solar facility covers approximately 800 acres and consists of over 350,000 solar panels. Central Iowa

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Power Cooperative (CIPCO) is the operator and is located two miles south of Wapello next to US-61.

QC Times article: (https://qctimes.com/news/local/muscatine/massive-solar-project-to-wapello/article_6c37cf87-4f5d-5621-864f-6c51aa474bba.html)

Solar Power World article: (https://www.solarpowerworldonline.com/2020/10/clenera-chooses-res-to-construct-wapello-solar-project-iowa/)

These articles have also been included as enclosures.

Prior to approval, Louisa County approved an amendment to their comp plan, approved a text amendment to their zoning ordinance, and approved a Special Use Permit through their Zoning Board of Adjustment. (Enclosed are copies of the Comp Plan Amendment, Misc Ordinance Updates, and Text Amendment for Zoning Ordinance – Division 115).

Case Study: Linn County

Linn County currently allows utility scale solar installations and wind farms are permitted with a Conditional Use Permit, on approval by the Board of Adjustment.

Recently, a text amendment was proposed to regulate utility scale solar installations through a Renewable Energy overlay zoning district. The basis for the amendment is staff believes the approval authority for these types of projects, which often encompass hundreds of acres and involve multiple interest groups, is more appropriately placed in the purview of the Board of Supervisors who serve as elected representatives of county residents. The Renewable Energy Overlay district fulfills the following purposes: encourages and supports the development of alternative and renewable energy resources; encourages development that conforms to the goals, objectives, and strategies in the county's comprehensive plan; and advances targets adopted by the Linn County Board of Supervisors as part of their Resolution Declaring a Climate Crisis and Committing to Accelerated Efforts to Limit the Global Average Temperature Increase.

Included in the enclosures is the staff report and executive summary from Linn County Planning and Development.