Vance COUNTY
NORTH CAROLINA

Conditional Use Permit Application

Vance County Planning & Development Department

Statement of Justification

1. Application is hereby made for the following use: *Please explain below:*

Construction of a 5 MWac Solar Farm

2. The intent is to : *Check all that apply:*
   - [x] Construct a new structure for a conditional use;
   - [ ] Repair the existing structure for the conditional use;
   - [ ] Alter and/or expand the existing structure for the conditional use;
   - [ ] Other

3. The following requirements have been provided: *Check all that apply:*
   - [x] Site plan;
   - [ ] Property description;
   - [x] NC DOT entrance permit (if applicable);

4. Additional information:

N/A

In order to issue a Conditional Use Permit, the Board shall consider each of the following conditions, and based on the evidence presented at the hearing(s) make findings in regards to each and must find that the issuance of the Conditional Use Permit is in the best interest of the county.

A. The use requested is among those listed as an eligible conditional use in the district in which the subject property is located.

Yes [✓] No [ ]

B. The use or development is located, designed and proposed to be operated so as to maintain or promote the public health or safety;

Yes [✓] No [ ]

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NORTH CAROLINA

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C. The use or development complies with all required regulations of the Zoning Ordinance and all applicable specific conditions and specifications;
Yes ☑ No ☐

D. The use or development is located, designed and proposed to be operated so as to maintain or enhance the value of adjoining or abutting property, or that use or development is a public necessity;
Yes ☑ No ☐

E. The use or development will be in harmony with the area in which it is located and will be in general conformity with the plan of development of the County.
Yes ☑ No ☐

Property Owners Signature

Date 2/5/13

Please sign in blue or black ink

Applicants' Signature

Date 2/11/13

Please sign in blue or black ink

400 West Main, Suite 503 Durham, NC 27701
919-682-6822 fax 919-321-1351
jnance@carolinasolarenergy.com

February, 13 2012

Jordan McMillen
Planning Director
156 Church Street, Suite 003
Henderson, NC 27536

Jordan,

See below the response to the justification questions on the Vance County CUP application:

A. The use requested is among those listed as an eligible conditional use in the district in which the subject property is located.

Current Zoning of the property is A-R Agricultural Residential. Recently Vance County passed a text amendment allowing Solar Farms to be permitted with a Conditional Use Permit in zoning districts AR, LI, IM, EIA and OI.

B. The use or development is located, designed and proposed to be operated so as to maintain or promote the public health or safety;

The use of the property will not endanger public health and safety. The Solar farm will be behind a locked 6' security fence. The project will be permitted and built in conformance with the requirements of the State Building and Electrical Codes (current addition) and be inspected by a Vance County building inspector to the most recent electrical and building codes. All components will have a UL listing. Highly visible emergency signs will be placed at key locations.

C. The use or development complies with all required regulations of the Zoning Ordinance and all applicable specific conditions and specifications;

Height: The system's equipment and structures will have a low profile (maximum height 7'). Except for electric distribution lines and utility poles

Setbacks: The solar farm shall meet or exceed the minimum zoning setback for the zoning district in which it is located. The front portion of the farm is setback at least 50' from NC HWY 39.

Screening and Fencing: Adequate fencing shall be provided along the perimeter of the area (with all entrances gated) to prevent trespassing on the property. Screening will conform to Vance County Zoning requirements.

D. The use or development is located, designed and proposed to be operated so as to maintain or enhance the value of adjoining or abutting property, or that use or development is a public necessity;

The surrounding properties are vacant agricultural and residential land. The solar system will not create noise or traffic (after construction) and will be grass covered. Visually the system has a very low profile (7-8') and is adequately set back from the property line. The proposed use will not adversely affect the surrounding land uses or values. The electricity made by the system will be sold to Progress Energy and used by neighboring properties.

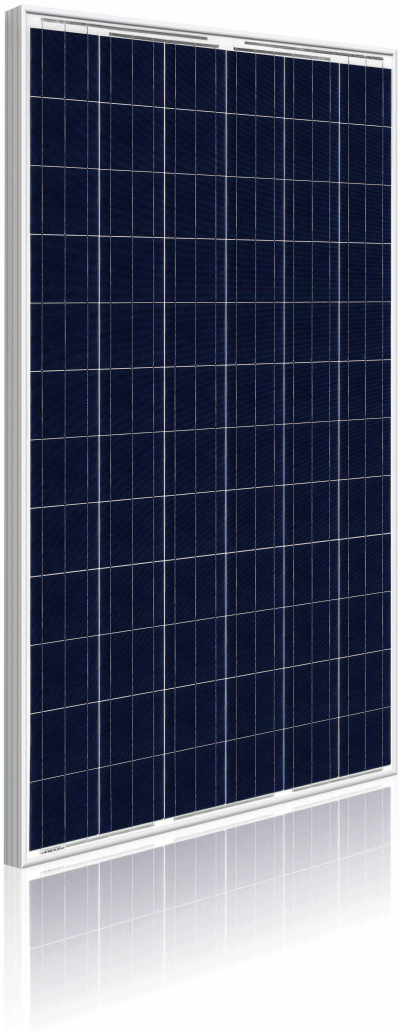
E. The use or development will be in harmony with the area in which it is located and will be in general conformity with the plan of development of the County.

The system will be developed according to the plan submitted. The surrounding properties are vacant agricultural and residential land. The solar system will not create noise or traffic (after construction) and will be grass covered. Visually the system has a very low profile (7-8') and is adequately set back from the property line. The proposed use will not adversely affect the surrounding land uses and it conforms to the rural character for the area proposed in the Comprehensive Plan. The development will be in harmony with the area, it will create no noise, be fenced in and

BOA 20130314-2
CUP

HSL 72 | Poly

Hanwha Solar



Five Key Features

1. Guaranteed quality: 12 year product warranty, 25 year linear performance warranty *
2. Predictable output: Positive power sorting of 0 to + 5 W
3. Innovation solutions: UL certified to 1000V for optimized system designs
4. Robust design: Module certified to withstand high snow loads, up to 5400 Pa **
5. Tariff free: High performance Taiwan cells

* Please refer to Hanwha Solar Product Warranty for details.
** Please refer to Hanwha Solar module Installation Guide.

Quality and Environmental Certificates

- ISO 9001 quality standards and ISO 14001 environmental standards
- OHSAS 18001 occupational health and safety standards
- UL 1703 1000V certification
- CEC listing

c UL us CEC

About Hanwha Solar

Hanwha Solar is a vertically integrated manufacturer of photovoltaic modules designed to meet the needs of the global energy consumer.

- High reliability, guaranteed quality, and excellent cost-efficiency due to vertically integrated production and control of the supply chain;
- Optimization of product performance and manufacturing processes through a strong commitment to research and development;
- Global presence throughout Europe, North America, and Asia, offering regional technical and sales support.

SUNNY CENTRAL
500CP-US / 630CP-US / 720CP-US / 750CP-US / 800CP-US

Economical
- Savings in balance of system costs due to 1,000 V operating voltage
- Outdoor enclosure allows for direct field deployment
- Small footprint and light weight for easy shipping and installation

Efficient
- Highest efficiency in its power class
- Full nominal power at ambient temperatures up to 50 °C
- 10% additional power for continuous operation at ambient temperatures up to 25 °C

Flexible
- Configurable DC voltage range
- Integrated AC disconnect for NEC 2011 compliance
- Optional DC disconnects

Reliable
- Easy and safe installation and with large, separate connection area
- Powerful grid management functions (incl. LVRT and Frequency Ride Through)
- Full UL1741 and IEEE 1547 compliance

SUNNY CENTRAL
500CP-US / 630CP-US / 720CP-US / 750CP-US / 800CP-US

UL listed for commercial and utility-scale projects

The Sunny Central CP-US series delivers outstanding performance. In combination with an external transformer, the Sunny Central CP-US can be connected to any utility grid or three-phase commercial service while directly providing grid management functions. The CP-US family is UL listed at 1,000 V DC and features an integrated AC disconnect in accordance with NEC 2011 requirements. Both the outdoor enclosure with the OptiCool™ cooling concept and the separate connection area ensures simple installation while maximizing returns. With a peak efficiency of 98.7 percent, it outperforms all other inverters in its class. The Sunny Central CP-US can also be integrated with the Power Plant Controller as well as the Medium-voltage Power Platform for utility-scale applications.

ASSIGNMENT OF REAL ESTATE PURCHASE AND SALE AGREEMENT AND EARNEST MONEY DEPOSIT

WITNESSETH:

This ASSIGNMENT OF REAL ESTATE PURCHASE AND SALE AGREEMENT AND EARNEST MONEY DEPOSIT, entered into this 27th day of December, 2012, by and between Minvera Group LLC, hereinafter referred to as "Assignor", Madison S. Hedgecock, hereinafter referred to as "Assignee", and Dement Farm LLC, hereinafter referred to as Buyer, for Purchase and Sale of Real Property of certain property being approximately 45 acres, located on Hwy 39 S in Vance County, hereinafter referred to as "The Contract";

WHEREAS, Assignor and Buyer have entered into a Real Estate Purchase and Sale Agreement for that certain real property being approximately 45 acres, located on Hwy 39 S in Vance County;

AND WHEREAS, Assignor will sell the approximately 45 acres, located on Hwy 39 S in Vance County to Assignee, such that the Contract for the approximately 45 acres, located on Hwy 39 S in Vance County will be assigned to Assignee;

AND WHEREAS, Assignor will deliver and assign the earnest money deposit to Assignee;

WHEREAS, for mutual consideration, the receipt of which is hereby acknowledged by all parties, Assignor hereby assigns and transfers its interest and rights, including the earnest money deposit in the amount of five thousand dollars ($5,000.00), into said Contract to Assignee.

This the 27th day of December, 2012.

Assignor: _____ MGR.
Minerva Group LLC

Assignee: _____
Madison S. Hedgecock

Buyer: _____
Dement Farm LLC

NORTH CAROLINA

INTERCONNECTION AGREEMENT

Dement Farm, LLC

This Interconnection Agreement ("Agreement") is made and entered into this 29th day of November, 2012, Carolina Power and Light Co. d/b/a Progress Energy Carolinas, Inc. ("Utility"), and Dement Farm, LLC ("Interconnection Customer") each hereinafter sometimes referred to individually as "Party" or both referred to collectively as the "Parties."

Utility Information

Utility: Progress Energy Carolinas, Inc.

Attention: Distribution Interconnected Generation Office

Address: P.O. Box 1551

City: Raleigh State: NC Zip: 27602

Phone: 919-546-7918 Fax: 919-546-3272

Interconnection Customer Information

Interconnection Customer: Dement Farm, LLC

Attention: Michael Cohen

Address: 1119 Us 15-501 Hwy South

City: Chapel Hill State: NC Zip: 27517

Phone: 919-960-6015 Fax: 919-960-7717

Interconnection Customer Site Information

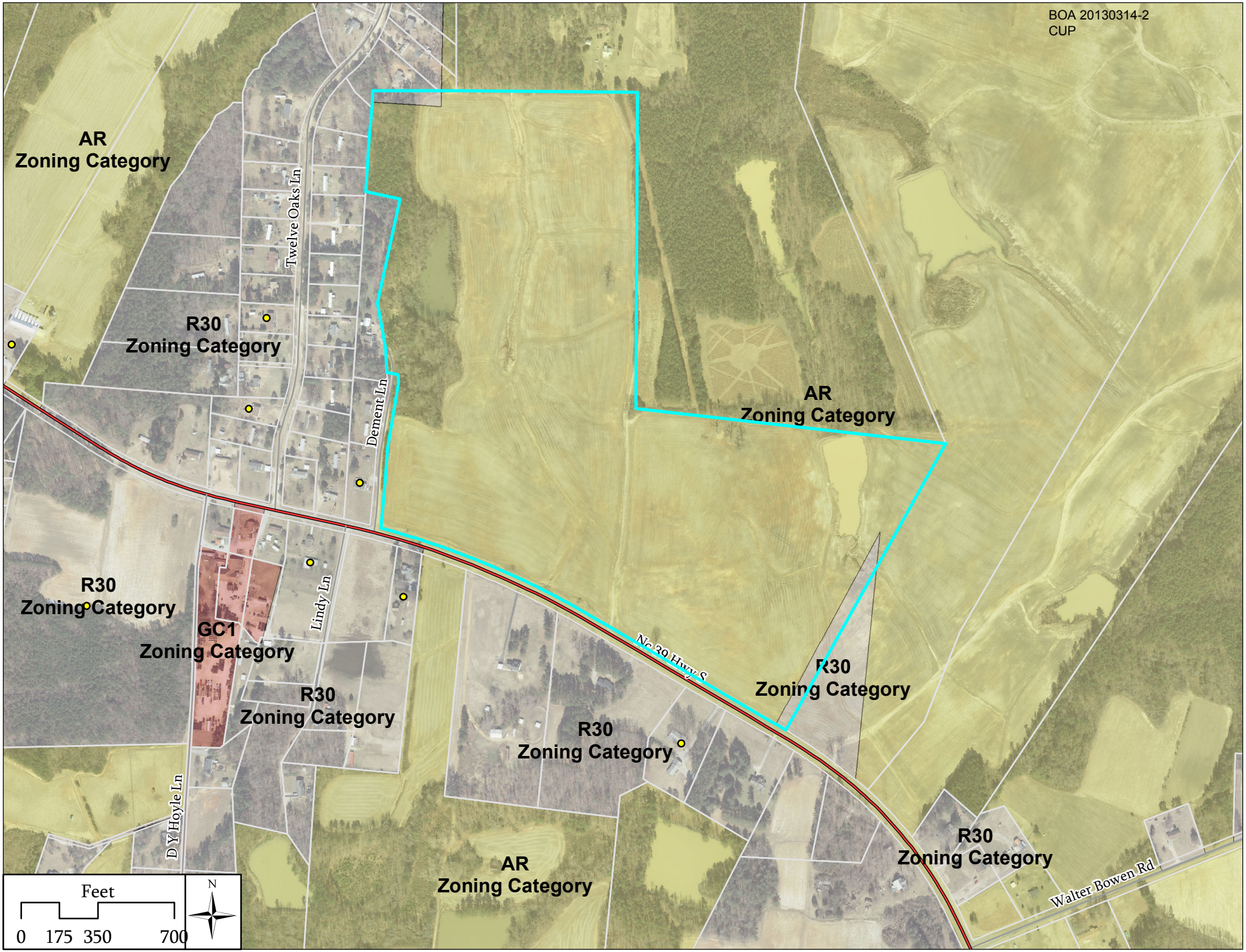
Interconnection Customer: Dement Farm, LLC

Site Address: 5393 NC 39

City: Henderson State: NC Zip: 27537

Interconnection Request ID No: **IPP305**

In consideration of the mutual covenants set forth herein, the Parties agree as follows:


BOA 20130314-2
CUP
AR
Zoning Category
R30
Zoning Category
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Zoning Category
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Zoning Category
AR
Zoning Category
R30
Zoning Category
Twelve Oaks Ln
Dement Ln
Lindy Ln
D Y Hoyle Ln
Walter Bowen Rd
Feet
0 175 350 700
N

Use Type	AR	R30	R20	R10	RMHC	HC	GC1	LI	IM	EIA	OI	OS	WOZ	Parking-Loading
Adult Establishments	X	X	X	X	X	CU	CU	CU	X	X	X	X	X	Parking: 4 per 1,000 SF Loading: N/A
Airports	CU	X	X	X	X	X	CU	CU	CU	CU	CU	X	X	Special Study Required***
Commercial Communications Towers (Cell Towers)	CU	X	X	X	X	CU	CU	CU	CU	CU	CU	CU	CU	Parking: 2 per tower Loading: 1
Cemetery (Church, Family)	P	P	P	CU	X	X	X	X	X	X	X	P	CU	N/A
Cemetery (Commercial)	P	CU	X	X	X	X	X	X	X	X	X	CU	CU	Parking: 6 per 1,000 SF of office-building Loading: 1
Shooting Ranges	CU	X	X	X	X	X	X	X	X	X	X	CU	CU	Parking: 1.5 per shooting station Loading: 1
Solar Collector (Accessory)	P	P	P	P	P	P	P	P	P	P	P	P	P	N/A
Solar Energy Systems, Large Scale (Solar Farms)	CU	X	X	X	X	X	X	CU	CU	CU	CU	X	X	Parking: 1/every 2 employees on shift of greatest employment
TEMPORARY USES														
Commercial (temporary-see Definitions) Outdoor Sales	P	P	X	X	X	P	P	P	P	P	P	P	P	Parking: staff review Loading: N/A
Concrete/Asphalt Operations	X	X	X	X	X	X	X	CU	P	X	X	X	X	Parking: staff review Loading: 1 per vehicle
Contractor's Office (located at project site for duration of project)	CU	CU	X	X	X	CU	CU	CU	P	CU	CU	X	CU	Parking: 1 per 200 SF Loading: N/A
Farmstand	P	P	X	X	X	P	P	P	X	X	X	P	P	Parking: 8 spaces Loading: N/A
Manufactured Housing Unit for Office and/or Exhibition	CU	CU	CU	CU	P	P	P	P	X	X	CU	CU	CU	Parking: 1 per vehicle Loading: N/A
Manufactured Home for Hardship	CU	CU	CU	CU	P	X	X	X	X	X	X	X	CU	Parking: 2 per dwelling unit Loading: N/A
Public Interest Event and/or Special Event	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	Parking: 1/patron Loading: 1 per vehicle
Temporary Miscellaneous Sales (see Definitions)	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	Parking: 1 per vehicle Loading: N/A

***See Section 6.10.L

c. *Warning signs.* Warning signs meeting National Rifle Association (NRA) guidelines for shooting ranges shall be posted at one hundred-foot intervals along the entire perimeter of the shooting range facility and along the entire perimeter of the property lines in the same intervals.
d. *Distance from occupied dwelling.* All shooting stations, targets, and firing lines shall be located at least one-half (1/2) mile from any existing, occupied dwelling.
e. *Access to facility.* Access to the facility and shooting range shall be secured and controlled, with ingress and egress permitted only during operating hours as established below. Prior to issuance of a permit, a valid driveway permit must be obtained from North Carolina Department of Transportation.
f. *Written variance.* The distance requirements of this section may be varied with written permission in the form of an affidavit from all adjoining property owners and all rightful leaseholders of dwellings located within the ½ mile surrounding area affected thereby, except that written approval is not needed for any adjoining land owned by the State of North Carolina.

5. Operational Requirements:
   a. *Maintenance.* Where not otherwise specified within this ordinance, shooting range facilities shall be operated and maintained in a manner that shall meet or exceed the guidelines as specified by the Range Technical Team Advisor upon inspection going by the guidelines in the NRA's Range Source Book: A Guide to Planning and Construction, current edition.
   b. *Best Management Practices.* Outdoor Shooting Ranges shall provide a plan outlining its Best Management Practices (BMPs) relating to lead management. Said plan shall meet or exceed the guidelines as specified by the Environmental Protection Agency's (EPA) Best Management Practices for Lead at Outdoor Shooting Ranges, current edition.
   c. *Hours of operation.* Shooting Ranges shall be allowed to operate between sunrise and sunset Monday through Saturday, except that the hours may be extended after sunset for purposes of subdued-lighting certification of law enforcement officers, or may be extended for other purposes only when a permit allowing such activity is issued in advance by the Sherriff's Office.
   d. *Liability insurance.* The permittee shall be required to carry a minimum of three million dollars ($3,000,000.00) per occurrence of liability insurance. Such insurance shall name Vance County as an additional insured party and shall save and hold Vance County, its elected and appointed officials, and employees acting within the scope of their duties harmless from and against all claims, demands, and causes of action of any kind or character, including the cost of defense thereof, arising in favor of a person or group's members or employees or third parties on account of any property damage arising out of the acts or omissions of the permittee, his/her group, club, or its agents or representatives. The County shall be notified of any policy changes or lapses in coverage.

N. Solar Energy Systems, Large Scale (Solar Farms)
   1. Height: Systems, equipment and structures shall not exceed twenty-five (25) feet in height when ground mounted. Excluded from this height requirement, however, are

electric transmission lines and utility poles. Roof mounted systems shall not exceed the maximum height for the applicable zoning district.

2. Setback: Active solar system structures must meet the following setbacks:
    a. Ground mounted– Ground mounted solar energy systems as part of a solar farm shall meet the minimum zoning setback for the zoning district in which it is located.
3. Screening and Fencing: Adequate fencing shall be provided along the perimeter of the area (with all entrances gated) to prevent trespassing on the property.
4. Lighting: All lighting shall be arranged and shaded so as to reflect the light away from adjoining properties and streets.
5. Noise: Noise levels measured at the property line shall not exceed fifty (50) decibels when located adjacent to an existing residence or residential district.
6. Power Transmission Lines: To the extent practical, all new power transmissions lines to any building, structure or utility connection shall be located underground. Existing above ground utility lines shall be allowed to remain in their current location.
7. Approved Solar Components: Electric solar system components must have a UL listing.
8. Compliance with Building and Electrical Codes: All solar farms shall be in conformance with the requirements of the State Building and Electrical Codes (current addition), the State of North Carolina and Vance County. All active solar systems shall be inspected by a Vance County building inspector.
9. Utility Notification: No grid tied photovoltaic system shall be installed until evidence has been given to the Planning and Development Department that the owner has been approved by the utility company to install an interconnected customer-owned generator. Off-grid systems shall be exempt from this requirement.
10. Abandonment: It is the responsibility of the owner to notify the County and to remove all obsolete or unused systems within twelve (12) months of cessation of operations. Reusable components are to be recycled whenever possible.

O. WIRELESS COMMUNICATIONS TOWERS ("CELL TOWERS")

1. The purpose of the following requirements is to promote and to protect the public health, welfare, and safety by regulating existing and proposed communication towers. The requirements are intended to protect property values, create a more attractive economic and business climate, and enhance and protect the scenic and natural beauty of designated areas.
2. *General Requirements.* When allowed, such towers and associated equipment shall be subject to the following additional requirements:
    a. Towers shall not interfere with normal radio and television reception in the vicinity. Commercial messages shall not be displayed on any tower. Violations shall be considered zoning violations and shall be corrected under the enforcement provisions.
    b. Lighting shall not exceed the Federal Aviation Administration (FAA) minimum if lighting is required by the FAA. The lights shall be oriented so as not to project directly onto surrounding residential property, consistent with FAA requirements. Prior to issuance of a building permit, the applicant shall be required to submit documentation from the FAA that the lighting is the minimum lighting required by the FAA.
    c. Towers shall be constructed and maintained in conformance with all applicable building code requirements.
    d. In order to protect the public from unnecessary exposure to electromagnetic radiation, the tower owner shall provide appropriate

What is solar power?

First used in about 1890, the word Photovoltaic, or "PV" for short, has two parts: photo, a stem derived from the Greek phos, which means light, and volt, a measurement unit named for Alessandro Volta (1745-1827), a pioneer in the study of electricity. So, photovoltaics could literally be translated as light-electricity. And that's just what photovoltaic materials and devices do; they convert light energy to electricity, as Edmond Becquerel and others discovered in the 18th Century.

How does it work?

When certain semiconducting materials, such as certain kinds of silicon, are exposed to sunlight, they release small amounts of electricity. This process is known as the photoelectric effect. The photoelectric effect refers to the emission, or ejection, of electrons from the surface of a metal in response to light. It is the basic physical process in which a solar electric or photovoltaic (PV) cell converts sunlight to electricity.

How do you "size" a Solar Installation?

Any power plant is sized in terms of "installed capacity" which is the amount of Watts, Kilowatts, or Megawatts(W, kW, MW respectively) the system has the capability to produce. The Consumable energy that the system generates is measured in kilowatt-hours (kWh). A 1 MW Solar PV system will generate approximately 1.2 Million kWh each year.

What are the benefits of Solar Power?

Intelligent Investment- Individuals, businesses, and governments are turning to the idea of investing in the facility that reduces their exposure to an increasingly volatile energy market. In addition, the PPA model has been proven both in the Wind and Solar industries as a avenue to allow entities to purchase electricity from a renewable project without dealing with the up-front costs.

Site Access- A well-designed PV system will operate unattended and requires minimal periodic maintenance. The savings in labor costs and travel expenses can be significant, keeping the final cost per kWh reasonable.

Environment- PV systems create no pollution, generate no waste products when operating, and offset emissions that would have been created by the generation of electricity from unpredictably-priced fossil fuels.

Maintenance- Any energy system requires maintenance, but experience shows that PV systems require less maintenance than other alternatives.

Durability- Most of today's PV modules are based on a proven technology that has experienced little degradation in more than 15 years of operation and generally operate for more than 25 years.

Cost- Although the up-front cost is high for a solar PV system, more and more value is being found in the security of reducing the amount of electricity purchased from a utility, because it reduces vulnerabilities to future increases in the price of electricity. With PECO rate caps coming off in 2011, the City will be exposed to higher electricity prices more than ever. Utilizing a PPA, as the City proposes to do, enables the City to gain access to the tax credits and other federal incentives to bring the cost per kWh down.

A 1 Megawatt Solar PV installation is enough to power over 110 House Holds each year. That's about 5 city blocks!

Conditional Use Permit Check Sheet

1. The use requested is among those listed as an eligible conditional use in the district in which the subject property is located.

	True	False		True	False		True	False	TOTAL
Alston:	☐	☐	Harvin:	☐	☐	Stainback:	☐	☐	
Brummitt:	☐	☐	Johnson:	☐	☐	Alternate 1:	☐	☐	
Haley:	☐	☐	Shaw:	☐	☐	Alternate 2:	☐	☐	

2. The use or development is located, designed and proposed to be operated so as to maintain or promote the public health or safety.

	True	False		True	False		True	False	TOTAL
Alston:	☐	☐	Harvin:	☐	☐	Stainback:	☐	☐	
Brummitt:	☐	☐	Johnson:	☐	☐	Alternate 1:	☐	☐	
Haley:	☐	☐	Shaw:	☐	☐	Alternate 2:	☐	☐	

3. The use or development complies with all required regulations of the Zoning Ordinance and all applicable specific conditions and specifications.

	True	False		True	False		True	False	TOTAL
Alston:	☐	☐	Harvin:	☐	☐	Stainback:	☐	☐	
Brummitt:	☐	☐	Johnson:	☐	☐	Alternate 1:	☐	☐	
Haley:	☐	☐	Shaw:	☐	☐	Alternate 2:	☐	☐	

4. The use or development is located, designed and proposed to be operated so as to maintain or enhance the value of adjoining or abutting property, or that the use is a public necessity;

	True	False		True	False		True	False	TOTAL
Alston:	☐	☐	Harvin:	☐	☐	Stainback:	☐	☐	
Brummitt:	☐	☐	Johnson:	☐	☐	Alternate 1:	☐	☐	
Haley:	☐	☐	Shaw:	☐	☐	Alternate 2:	☐	☐	

5. The use or development will be in harmony with the area in which it is to be located and will be in general conformity with the plan of development of the County.

	True	False		True	False		True	False	TOTAL
Alston:	☐	☐	Harvin:	☐	☐	Stainback:	☐	☐	
Brummitt:	☐	☐	Johnson:	☐	☐	Alternate 1:	☐	☐	
Haley:	☐	☐	Shaw:	☐	☐	Alternate 2:	☐	☐	