

DEPARTMENT OF PLANNING AND ZONING PLANNER'S REPORT

DATE: June 4, 2019
TO: Tonya Hutson
FROM: Lynn Patterson

RE: Design Review – 600 South Central Avenue

BACKGROUND

The City of Hapeville has received a Design Review Application from Casey Montana Busch for the addition of solar panels to the roof of the existing building at 600 South Central Avenue.

The property is zoned RMU, Residential Mixed-Use, and is subject to the Commercial/Mixed-Use Area, Subarea B, of the Architectural Design Standards.

CODE

Sec. 81-1-6. - Commercial/mixed-use area.

- (f) Roof and chimney standards.
 - 1. Principal building roofs for one-family detached dwellings shall have a minimum usable life of 30 years, per manufacturer's warranty.
 - 2. Roof shingles shall be slate, cedar, or asphalt.
 - 3. Roof tiles shall be clay, terra cotta or concrete.
 - 4. Street-facing gutters shall be copper, aluminum or galvanized steel.
 - 5. Downspouts shall match gutters in material and finish.
 - 6. Metal flashing, where utilized, shall be copper or factory-finished sheet metal and shall be of a color that blends with other building materials.
 - Chimneys visible from a public right-of-way shall not be faced in wood or fiber cement siding and shall not be a metal or ceramic pipe. Chimneys shall be wrapped in a full-depth brick, stone or masonry finish material.
 - 8. Chimneys located on an exterior building wall shall begin at grade.
 - 9. Flat roofs shall be permitted.
 - 10. Buildings with sloped roofs not completely screened from the adjacent street by a parapet shall have a pitch between 4:12 and 12:12. Mansard roofs are prohibited. Pitched-roof materials are limited to roof shingles, natural slate, wood shake, factory-finished sheet metal, and terra cotta tile, unless determined to be historically appropriate by the planning and zoning manager.
 - 11. Roof-mounted lights and flagpoles are prohibited. Roof-mounted satellite dishes or telecommunication devices shall be screened from public view and shall blend with the background of the building as practical.

12. In subarea A roof lines shall appear flat from the adjacent street and roof structures shall be vertically screened by a parapet wall.

FINDINGS

The Architectural Design Standards do not provide guidance for the installation of roof-mounted solar panels. As solar panels are not directly allowed by the code, a Design Exception would be required.

CITY OF HAPEVILLE DESIGN REVIEW APPLICATION

SUBMITTAL	DATE:JUN 0 4 2019		
NOTE:	All applications must be ty authorized representative is required. Meeting to answer questions.		
	The Design Review Committee Every attempt will be made to month's agenda following the supporting documents; however reserves the right to schedule ap	place your application s submittal of a com r, that may not always	for review on the next pleted application with be possible. The City
Applicant:	Casey Montana Busch	Contact Number:	678-672-8822
Applicants Add	dress: 615 Deer Run SW	Lilburn, GA 30047	
E-Mail Address	s: _montana@altenergyse.co	m Zoning Classificati	on: Commercial
Address of Pro	pposed Work:600 S Cer	ntral Ave. Hapeville (GA 30354
	ORMATION MUST BE PROVIDED)		
Property Owne	er: Dr. Jay Prakash	Contact Number: _	
	ription (including occupancy ty stem. Commercial building (l		f-mounted, ballasted
Contractors N	Name:Alternative Energy S	outheast_ Contact Nun	nber: <u>678 897 7262</u>
Contact Pers	on:Casey Montana Busch	Contact Nun	nber: <u>678 897 7262</u>
property. I do laccurate, and I application and reserves that rig I further unders full. I hereby ac write the Englis voluntarily compthe City of Hape	pplication to the City of Hapeville, to thereby swear or affirm that the informunderstand that any inaccuracies many action taken on this application to enforce any and all ordinances retand that it is my/our responsibility to knowledge that all requirements of the language and/or this document hableted this application. I understand the ville, Georgia pursuant to O.C.G.A. 16-	mation provided here and a nay be considered just can on. I understand that the egardless of any action or a conform with all of City of the City of Hapeville shall be seen read and explained that it is a felony to make false 10-20 and I may be prosecu	bove is true, complete and use for invalidation of this City of Hapeville, Georgia, approval on this application. If Hapeville's Ordinances in adhered to. I can read and to me and I have full and se statements or writings to ted for violation thereof.
Applicants S	Signature	Date	/3/19
Applicants t	2.3.14.41.0	Date	

Project Class (check one):
ResidentialCommercialMixed-Use Development
Project Type:
New Commercial ConstructionAddition to Existing Commercial Building
Addition to Existing Residential StructureAccessory Structure
Site Plan, Grading & LandscapingNew Single Family Residential Construction
Other Installation of roof-mounted, ballasted solar PV system
Total Square Footage of proposed New Construction: PV System Footprint: Approx 4500sqft
Total Square Footage of existing building: Rooftop: Approx 6000sqft
Estimated Cost of Construction: \$172,000.00
List/Describe Building Materials on the exterior of the existing structure: The solar panels will be installed on the flat roof via a non-penetrating, fully ballasted mounting system. They will not be visible from the ground. The conduit from the
roof will be installed inside of a chase and will not be visible from the outside.
List/Describe Building Materials <u>proposed</u> for the exterior facade of the new structure:

NOTICE

Please be advised that the Community Service Department is here to assist all applicants regarding application procedures, meeting schedules and necessary deadlines. The Community Service Department does NOT make any final decisions for the Design Review Committee, Sign Committee, Planning Commission, Board of Appeals or rezoning request to Mayor and Council.

A complete application must be submitted before the Community Service Department will accept an application and forward the same to the appropriate entity.

Building inspections issued by the City of Hapeville are contracted out to State of Georgia Certified Inspectors. These inspectors make the final decisions regarding building, electrical, plumbing and HVAC work completed in the City of Hapeville. The Hapeville Fire Marshal conducts inspections issued through the Community Services Department as needed. Both the Certified Inspectors and Fire Marshal make the final decisions before Certificates of Occupancy's are issued.

Please be advised that the Community Service Department shall not be responsible for your purchasing materials, equipment, items, signs, etc... before you receive final approval by any entity whose approval is required.

I understand that it is a felony to make false statements or writings to the City of Hapeville, Georgia pursuant to O.C.G.A. 16-10-20 and I may be prosecuted for a violation thereof.

(Please Print & Initial)

Casey Montana Busch wear or affirm that before receipt of an application, I have received this notice and I read and write the English language or I have had someone read and explain this document to me.



DEPARTMENT OF PLANNING AND ZONING

DESIGN REVIEW APPLICATION INSTRUCTIONS AND ACKNOWLEDGEMENT

	e undersigned, agree that with my signature and submission to the City of Hapeville, wing:	I have done the
	Read the City of Hapeville's Architectural Design Guidelines and relevant Code section proposed project. The Architectural Design Guidelines may be found here: 5://library.municode.com/ga/hapeville/codes/code_of_ordinances?nodeld=PTIICOOf	
✓	Ensured that my proposed project meets all of the required criteria per the City of H of Ordinances.	apeville Code
✓	Submitted my application materials in full by the published deadline for review by States Design Review Committee meeting.	taff prior to the
	Identified and explained all deficiencies or components of the proposed project that with the requirements set forth in the Code. This explanation should be submitted a document in the application.	do not meet as a separate
<u> </u>	Understood that any deficiencies in the application must be resolved at least 10 days. Design Review Committee meeting or the application may not be presented to the D	s prior to the ORC for review.
✓,	Submitted architectural drawings and details for all projects unless allowed in writing Community Services or Planning & Zoning Department.	g by the
/	Agreed to submit any required revisions by the Design Review Committee with upda to the Community Services Department for review prior to requesting any permits.	ted drawings
THE RESERVE OF THE PARTY.		05/30/2019
Printe	ed Name Signature	Date

Should you have any questions, please do not hesitate to contact the Community Services Department at 404-669-2120.

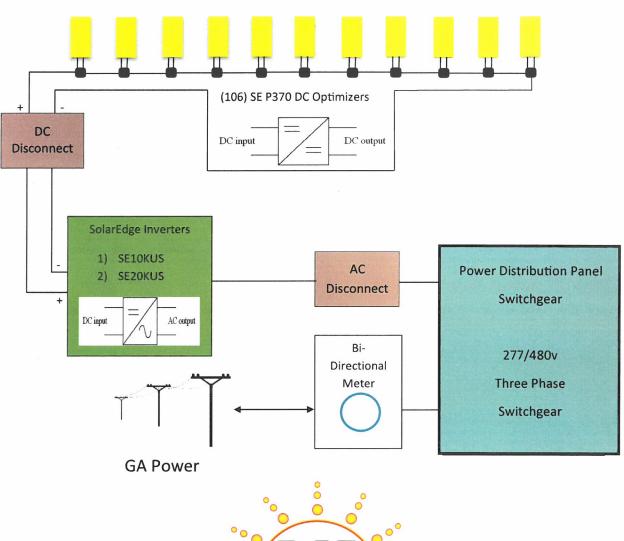
Thank you for interest and investment in the City of Hapeville.

One-Line Diagram

600 S Central Ave. Hapeville, GA 30354

38.2kW Solar PV System

(106) RISEN RSM72-6-360M PV Modules





Atlanta, GA | Phone: 770.490.6178 Info@AltEnergySE.com | www.AltEnergySE.com

Page #6: Obstructions 600 S Central Ave Atlanta GA 30354 US Roof Vent, Roof Drain, other thing Roof Drain (flush) 2x2x2 Roof Vent Roof Drain (flush) 42' Cooling Tower **Cooling Tower** Roof Drain (flush) 2x2x2 Roof Vent 26' 1: 4'L x 4'W x 3'H 2: 10' x 9' x 7' 3: 9' x 2' x 3' 4: 3' x 4' x .5' Roof Vent, Roof Hatch, other thing

Alternative Energy Solutions; Sollega Solar Project; 600 S Central Ave, Hapeville, GA 30354, USA





FastRack510™

The simple solar racking solution for flat roof or ground mount PV installations.

- 5° or 10° mounting solution
- · Simple, modular, one piece design
- · Universal design compatible with all framed modules
- · Fully ballasted, heat welded, anchored and hybrid options
- Roof friendly with round edges and low point loads

- · One size bolt with all top down connections
- · Injection molded with Ultramid® by BASF
- · Engineering and ballast layout services available
- · UL 1703 Class "A" Type 1 and 2 Module
- · UL 467 Integrated grounding
- · 100% Recyclable

Easy to install:







2 Add Ballast and Clamps

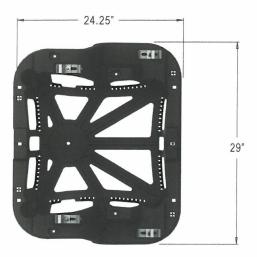


Attach Modules





FastRack510™

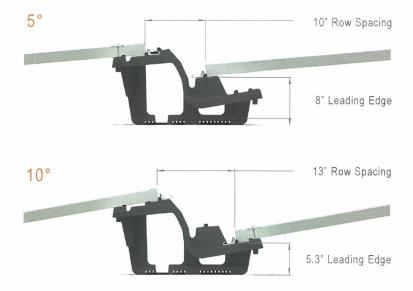






The Simple Solar Racking Solution™

Tilt Angle	5°	10°	
Row Spacing	10" (254 mm)	13" (330 mm)	
Leading Edge	8" (203 mm)	5.3" (135 mm)	
Compatible Modules	All-framed modules 31" - 44" in width (787 mm and 1117 mm)		
Weight	4.5 lbs.	(2 kg)	
Ballast Requirements 4" x 8" x 16" Roof Paver ASTM Designation		1.5 lbs each) based on ion C1491 – 01a.	
Material	Material BASF Ultramid® glass reinforced nylon		
Module Orientation	Landscape		
Wind Load Criteria	Meets ASCE 7-10 up to 165 mph		
UL Certification UL 1703: Class 'A' Type 1,2,3 Module, UL46			
Warranty	25 Year Limited Warranty		
Dimensions	(LxWxH) 24.25 x 29 x 14" 616 x 737 x 356mm		
Disassembly	Disassembly Simple disassembly and 100% recyclable conten		
Patent	Patented design: US		



HIGH PERFORMANCE MONOCRYSTALLINE PERC MODULE

RSM72-6-360M-380M

72 CELL MONOCRYSTALLINE MODULE

360-380Wp POWER OUTPUT RANGE

1500VDC MAXIMUM SYSTEM VOLTAGE

19.6% MAXIMUM EFFICIENCY



About Risen Energy

Risen Energy is a leading, global tier 1 manufacturer of high-performance solar photovoltaic products and provider of total business solutions for residential, commercial and utility-scale power generation. The company, founded in 1986, and publicly listed in 2010, compels value generation for its chosen global customers. Techno-commercial innovation, underpinned by consummate quality and support, encircle Risen Energy's total Solar PV business solutions which are among the most powerful and cost-effective in the industry. With local market presence and strong financial bankability status, we are committed, and able, to building strategic, mutually beneficial collaborations with our partners, as together we capitalise on the rising value of green energy.

KEY SALIENT FEATURES



Global, Tier 1 bankable brand, with independently certified state-of-the-art automated manufacturing



Industry leading lowest thermal co-efficient of power



Industry leading 12 years product warranty



Excellent low irradiance performance



Excellent PID resistance



Positive tight power tolerance



Dual stage 100% EL Inspection warranting defect-free product



Module Imp binning radically reduces string mismatch losses



Warranted reliability and stringent quality assurances well beyond certified requirements



Certified to withstand severe environmental conditions

- Anti-reflective & anti-soiling surface minimise power loss from dirt and dust
- Severe salt mist, ammonia & blown sand resistance, for seaside, farm and desert environments
- Excellent mechanical load 2400Pa & snow load 5400Pa resistance







ISO9001 ISO14001 OHSAS18001 IEC TS 62941





















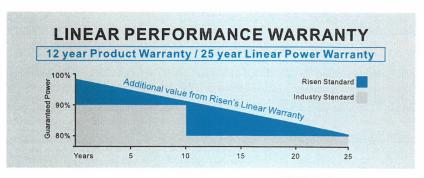


RISEN ENERGY CO., LTD.

Tashan Industry Zone, Meilin, Ninghai 315609,Ningbo | PRC

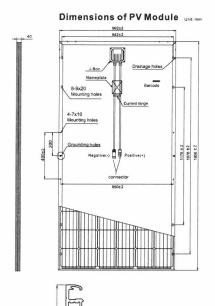
Tel: +86-574-59953239 Fax: +86-574-59953599

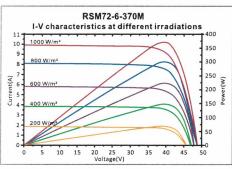
E-mail: marketing@risenenergy.com Website: www.risenenergy.com

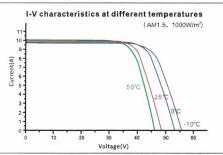














ELECTRICAL DATA (STC)						
Model Number	RSM72-6-360M	RSM72-6-365M	RSM72-6-370M	RSM72-6-375M	RSM72-6-380N	
Rated Power in Watts-Pmax(Wp)	360	365	370	375	380	
Open Circuit Voltage-Voc(V)	47.30	47.70	48.15	48.60	48.95	
Short Circuit Current-Isc(A)	9.80	9.85	9.90	9.95	10.00	
Maximum Power Voltage-Vmpp(V)	38.95	39.25	39.60	39.95	40.25	
Maximum Power Current-Impp(A)	9.25	9.30	9.35	9.40	9.45	
Module Efficiency (%)	18.6	18.8	19.1	19.3	19.6	

STC: Irradiance 1000 W/m², Cell Temperature 25°C, Air Mass AM1.5 according to EN 60904-3.

ELECTRICAL DATA (NMOT)						
Model Number	RSM72-6-360M	RSM72-6-365M	RSM72-6-370M	RSM72-6-375M	RSM72-6-380M	
Maximum Power-Pmax (Wp)	269.3	272.8	276.8	280.7	284.3	
Open Circuit Voltage-Voc (V)	43.50	43.90	44.30	44.70	45.00	
Short Circuit Current-Isc (A)	8.04	8.08	8.12	8.16	8.20	
Maximum Power Voltage-Vmpp (V)	35.70	36.00	36.30	36.60	36.90	
Maximum Power Current-Impp (A)	7.55	7.59	7.63	7.67	7.71	

NMOT: Irradiance at 800 W/m², Ambient Temperature 20°C, Wind Speed 1 m/s.

MECHANICAL DATA				
Solar cells	Monocrystalline 156.75×156.75 mm, 5BB			
Cell configuration	72 cells (6×12)			
Module dimensions	1956×992×40mm			
Weight	22kg			
Superstrate	3.2 mm, High Transmission, Low Iron, Tempered ARC Glass			
Substrate	White Back-sheet			
Frame	Anodized Aluminium Alloy type 6063T5, Silver Color			
J-Box	Potted, IP67, 1500VDC, 3 Schottky bypass diodes			
Cables	4.0mm² (12AWG), 1200mm length			
Connector	Risen Twinsel PV-SY02, IP67			

TEMPERATURE & MAXIMUM RATINGS				
Nominal Module Operating Temperature (NMOT)	45°C±2°C			
Temperature Coefficient of Voc	-0.29%/°C			
Temperature Coefficient of Isc	0.05%/°C			
Temperature Coefficient of Pmax	-0.39%/°C			
Operational Temperature	-40°C~+85°C			
Maximum System Voltage	1500VDC			
Max Series Fuse Rating	20A			
Limiting Reverse Current	20A			

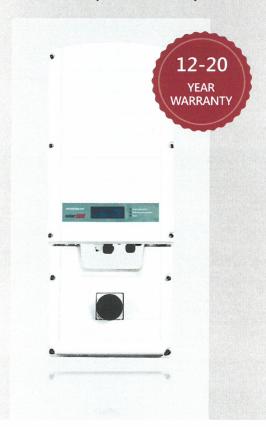
PACKAGING CONFIGURATION				
	40ft	20ft		
Number of modules per container	648	270		
Number of modules per pallet	27	27		
Number of pallets per container	24	10		
Packaging box dimensions (LxWxH) in mm	1980×1130×1130	1980×1130×1130		
Box gross weight[kg]	640	640		

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

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Three Phase Inverters

For the 277/480V Grid for North America SE10KUS / SE20KUS / SE30KUS / SE33.3KUS



INVERTERS

The best choice for SolarEdge enabled systems

- Specifically designed to work with power optimizers
- Superior efficiency (98.5%)
- Integrated arc fault protection and rapid shutdown for NEC 2014 and 2017, per article 690.11 and 690.12
- UL1741 SA certified, for CPUC Rule 21 grid compliance
- Built-in module-level monitoring

- Internet connection through Ethernet or Wireless
- Small, lightweight, and easy to install outdoors or indoors on provided bracket
- Fixed voltage inverter for longer strings
- Integrated Safety Switch
- Supplied with RS485 Surge Protection Device, to better withstand lightning events



/ Three Phase Inverters

For the 277/480V Grid⁽¹⁾ for North America SE10KUS / SE20KUS / SE30KUS / SE33.3KUS

All the control of th	SE10KUS	SE20KUS	SE30KUS	SE33.3KUS	
OUTPUT					
Rated AC Power Output	10000	20000	30000	33300	VA
Maximum AC Power Output	10000	20000	30000	33300	VA
AC Output Line Connections		4-wire WYE (L1-L	2-L3-N) plus PE		
AC Output Voltage Minimum-Nominal-Maximum ⁽²⁾ (L-N)	244-277-305				Vac
AC Output Voltage Minimum-Nominal-Maximum ⁽²⁾ (L-L)		422.5-4	80-529		Vac
AC Frequency Min-Nom-Max [©]		59.3 - 6	0 - 60.5		Hz
Max. Continuous Output Current (per Phase)	12	24	36.5	40	А
GFDI Threshold		1			А
Utility Monitoring, Islanding Protection, Country Configurable Set Points		Ye	25		
INPUT					1
Maximum DC Power (Module STC)	13500	27000	40500	45000	W
Fransformer-less, Ungrounded		Ye	es	1	
Maximum Input Voltage DC to Gnd		49	00		Vdc
Maximum Input Voltage DC+ to DC-		98	30		Vdc
Nominal Input Voltage DC to Gnd		42	10		Vdc
Nominal Input Voltage DC+ to DC-	840				Vdc
Maximum Input Current	13.5	26.5	39	40	Adc
Maximum Input Short Circuit Current	45				
Reverse-Polarity Protection		Ye	·S		
Ground-Fault Isolation Detection	1MΩ Sensitivity 350kΩ Sensitivity ⁽³⁾			ensitivity ⁽³⁾	
EC Weighted Efficiency	98 98.5		3.5	%	
Night-time Power Consumption	< 3 < 4			4	W
ADDITIONAL FEATURES					
upported Communication Interfaces		RS485, Ethernet, 2	ZigBee (optional)		T
Rapid Shutdown – NEC 2014 and 2017 690.12	Auto	omatic Rapid Shutdown	upon AC Grid Disconr	nect	
RS485 Surge Protection		Supplied with	the inverter		
STANDARD COMPLIANCE					
afety	UL1741, UL1	741 SA, UL1699B, CSA C		ccording to	
Grid Connection Standards		IEEE1547, Rule 2			
missions		FCC part1	5 class B		
NSTALLATION SPECIFICATIONS					- Angelia
AC output conduit size / AWG range	3/4" minimum	/ 12-6 AWG	3/4" minimur	m / 8-4 AWG	
DC input conduit size / AWG range		3/4" minimum	1 / 12-6 AWG		
Number of DC inputs	2 pairs 3 pairs ⁽⁴⁾		irs ⁽⁴⁾		
timensions (H x W x D)		21 x 12.5 x 10.5 /	540 x 315 x 260		in / mr
Dimensions with Safety Switch (H x W x D)		30.5 x 12.5 x 10.5 /			in / mr
Veight	73.2 /	33.2	99.5	/ 45	lb / kg
Veight with Safety Switch	79.7 / 36.2			lb / kc	
Cooling		Fans (user re			
Voise	< 5	0	<	55	dBA
Operating Temperature Range		-40 to +140 /			°F / °C
Protection Rating	NEMA 3R				

[©] For 208V inverters refer to: http://www.solaredge.com/files/pdfs/products/inverters/se-three-phase-us-inverter-208V-datasheet.pdf © For other regional settings please contact SolarEdge support © Where permitted by local regulations

 ${}^{\text{(s)}} \ For power de-rating information refer to: https://www.solaredge.com/sites/default/files/se-temperature-derating-note-na.pdf$

⁽⁴⁾ Field replacement kit for 1 pair of inputs P/N: DCD-3PH-1TBK; Field replacement kit for 3 pairs of fuses and holders P/N: DCD-3PH-6FHK-S1