BEFORE THE OHIO POWER SITING BOARD

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In the Matter of the Application of Angelina Solar I, LLC for a Certificate of Environmental Compatibility and Public Need

Case No. 18-1579-EL-BGN

REBUTTAL TESTIMONY OF MATT MARQUIS

1 Please state your name, title and business address. 0.1. 2 A.1. My name is Matt Marquis. I am a Project Engineer at Hull & Associates, Inc. 3 My business address is 6397 Emerald Parkway, Suite 200, Dublin, OH 43016. 4 **Q.2.** What are your duties as a Project Engineer? 5 A.2. As a project engineer at Hull & Associates, Inc. I am responsible for managing 6 projects related to storm water and hydrologic and hydraulic (H&H) studies. I am also a technical lead for many of the same projects I manage and others throughout the 7 8 company. I am responsible for civil engineering design for dams, landfills and land 9 development projects. For dam projects, I am responsible for performing dam site 10 inspections, performing H&H analysis to support rehabilitation and repair options to 11 achieve regulatory compliance, developing Emergency Action Plans and Operation 12 Maintenance and Inspection Manuals, and developing construction drawings and 13 quantities. For storm water management projects and all other projects at Hull, I prepare 14 H&H studies to support the engineering design, I prepare construction drawings with erosion and sediment control design, and I provide Ohio EPA surface water construction 15 16 permitting assistance for both public and private Clients through preparation of Storm Water Pollution Prevention Plans. 17

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Q.3. What is your educational and professional background?

2 I am a registered Professional Engineer in the state of Ohio, Pennsylvania and A.3. 3 West Virginia and a Certified Floodplain Manager with the state of Ohio. I completed my 4 master's degree in civil engineering in 2014 with a focus on geotechnical engineering 5 from Norwich University in Northfield, VT. I completed my bachelor's degree in 6 construction engineering technology in 2011 from the University of Toledo. I completed 7 nearly 12 months over three calendar years of cooperative work-education as a fulltime 8 engineer at BBC&M Engineering, Inc. in Dublin, OH before being hired in 2011 as a 9 staff engineer. Soon after being hired, BBC&M was acquired by S&ME, Inc. and I 10 continued working at S&ME until September, 2017 when I joined Hull & Associates, 11 Inc. I am currently a project engineer at Hull. Throughout my career I have served on 12 multiple boards and committees for professional development. I spent three years as a 13 member of the Central Ohio Section of the American Society of Civil Engineers younger 14 member group and was elected vice president of the group in my third year. My career 15 has focused on engineering projects related to water resources. My project experience 16 includes a wide range of hydrologic and hydraulic (H&H) analyses, surface water 17 management and erosion and sediment control design. I function as the H&H lead on 18 many large and small engineering design projects and flood studies for public and private 19 clients covering dams, landfills, ash ponds, site development and redevelopment, site 20 remediation, oil & gas projects, and stream and wetland restoration projects. My 21 technical hydrologic experience includes watershed analysis using simplified methods 22 such as the rational method and TR-20 through more complex statistical and regression analyses using stream and rainfall gage data, 1-dimensional and 2-dimensional stream 23

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1		channel and floodplain modeling, dam breach and breach inundation mapping studies,
2		and steady-state flood studies in support of project work within mapped floodplains and
3		floodways established by Flood Insurance Rate Maps. My technical surface water
4		hydraulics experience includes pressure pipe flow, weir flow, culvert design, inlet and
5		outlet protection, open channel armoring design, and steady-state and unsteady hydraulic
6		modeling of streams and rivers. During my time at S&ME, I also worked closely with the
7		Ohio Department of Natural Resources Division of Engineering and Division of Water
8		Resources Dam Safety under an owner-agent contract for nearly two years to assist the
9		Divisions with the update and consistency reviews of all 54 state-owned Class I dam
10		Emergency Action Plans, each of which included flood inundation mapping updates.
11	Q.4.	On whose behalf are you offering testimony?
12		A.4. I am testifying on behalf of the Applicant, Angelina Solar I, LLC.
13	Q.5.	What is the purpose of your testimony?
14		A.5. The purpose of my testimony is to address Mr. Mast's testimony regarding his
15		concern about increased flooding at his property and in the Village of Fairhaven.
16	Q.6.	Have you reviewed Mr. Mast's testimony in this proceeding?
17		A.6. I have reviewed both his direct testimony marked as CCPC Ex. 5 and his
18		supplemental direct testimony marked as CCPC Ex. 6.
19	Q.7.	What is a watershed?
20		A.7. A watershed is an area or region drained by a river, river system, or water body.
21		The National Resources Conservation Service (NRCS) defines and compares watersheds
22		for watershed assessments. One way that watersheds across the US are defined is by a
23		Hydrologic Unit Code (HUC). The larger the watershed the fewer numerical digits used to

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define that watershed. HUC-12 is a more local subwatershed level that captures tributary systems and smaller creeks and rivers.

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Can you describe the watersheds affected by the Project area? **O.8**.

4 **A.8**. Yes. I used publicly available information from the US Geologic Survey website 5 StreamStats, the National Hydrography Dataset from the EPA, aerial imagery from the Ohio Geographically Referenced Information Program, and GIS shapefile data of the 6 7 project boundary provided by Open Road Renewables, to identify three HUC-12 8 watersheds that include portions of the Project area. Each of the three watersheds include 9 three unique streams described in the NHD as Four Mile Creek, Little Four Mile Creek, 10 and East Fork Four Mile creek. The Four Mile Creek watershed includes Israel Township, the Village of Fairhaven and Mr. Mast's property. The Four Mile Creek watershed covers 11 12 38.3 square miles (sqmi), of which 1.0 sqmi (or 2.6% of the watershed) is part of the project 13 area. Using Streamstats I defined the portion of the Four Mile Creek watershed that affects 14 the Village of Fairhaven and Mr. Mast's property. The subwatershed is approximately 32.2 15 sqmi, of which only 0.08 sqmi (or 0.2% of the watershed) is part of the proposed project 16 area. The Little Four Mile Creek watershed includes areas to the west of the Four Mile 17 Creek watershed and extends into part of Indiana before rejoining the other two watersheds 18 near Acton Lake. The Little Four Mile Creek watershed covers 30.7 square miles (sqmi), 19 of which 0.4 sqmi (or 1.3% of the watershed) is in the proposed project area. The East Fork 20 Four Mile Creek watershed includes areas to the west and south of the Four Mile Creek 21 watershed before converging with the other watersheds near Acton lake covers 16.5 square 22 miles (sqmi), of which 0.06 sqmi (or 0.3% of the watershed) is in the proposed project area.

1 **Q.9**. Based on your review and experience, do you believe that the Project will present an 2 increased risk of flooding at Mr. Mast's property or to the Village of Fairhaven? 3 No. As previously stated, the project area only contributes 0.2% of the entire A.9. 4 watershed area to the Village of Fairhaven and Mr. Mast's property. The Village along 5 Four Mile Creek and the entirety of Mr. Mast's property falls within a FEMA designated 6 100-year floodplain with a base flood elevation and floodway established, indicating that 7 a detailed study was performed for that portion of Four Mile Creek. The flood mapping for 8 this portion of Four Mile Creek can be found on Flood Insurance Rate map for Preble 9 County, Ohio, map number 39135C0220D, Effective March 2, 2010. The fact that such a 10 small percentage of the watershed is affected by the project area suggests that there is no 11 increase in flood risk by the project to both Mr. Mast's property and the Village of 12 Fairhaven.

13 Q.10. Does this conclude your rebuttal testimony?

14 **A.10.** Yes, it does.

CERTIFICATE OF SERVICE

The Ohio Power Siting Board's e-filing system will electronically serve notice of the filing of this document on the parties referenced in the service list of the docket card who have electronically subscribed to this case. In addition, the undersigned certifies that a courtesy copy of the foregoing document is also being served upon the persons below via electronic mail this 23rd day of August 2019.

/s/ Michael J. Settineri

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Summary: Testimony - Rebuttal Testimony of Matt Marquis electronically filed by Mr. Michael J. Settineri on behalf of Angelina Solar I, LLC