

NOVA Solar Proposal

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Abstract: In Virginia the cost of electricity has increased by approximately 3.2% over the past ten years. The cost of photovoltaic solar systems has caused the amount of solar panel system users to rise. This leaves electricity distribution companies with the options of either (1) maintaining current business models or (2) adopting a business model that provides customers the option to generate energy through solar panels. Using Geographic Information System (GIS), a model representing the potential solar energy generation for rooftops was created. The output is then compared to total energy demanded by serviced residential homes to find the profitability of each alternative. The initial results lead to the conclusion that, due to Virginia's current regulations and overall state on solar energy, alternative (1) is the most viable. Sensitivity analysis combined with loss mitigation strategies show the environments in which alternative (2) becomes more viable.

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