

1<sup>st</sup> year student Ahmed Nasr Ahmed ranked 2nd in open innovation call titled "Parking for power: Charge and avoid shortage in the grid" by Climate KIC



**Ahmed Nasr Ahmed,**  
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On 11 February 2019 Climate KIC released an open innovation call titled "Parking for power: Charge and avoid shortage in the grid" the aim of the challenge was to come up with innovative solutions was targeting solving the problem of power shortage in the distribution grid with drastically large penetration number of charging stations for electric cars in new parking garages. The problem also was distribution grid in southern Sweden is already facing major challenges. while cities like Malmö and Lund are growing rapidly, the regional power consumption far outgrows the production. The capacity available from the national transmission grid is limited and will not be expanded until 2027. When power peaks occur, the electricity consumption is exceeding the regional power grid subscription level towards the national transmission grid. So teams should come up with a solution that allow for as many charging stations as possible, with as low power outtake from the grid as possible in addition to that the solution should also allow the parking garage be a user-friendly and environmentally excellent solution as well as an economic win-win situation for both the owner of the parking garage and the grid operator.

So I developed a solution called elektro that depending on a unique energy distribution management tools with renewable energy sources installed on the parking with a connection with the grid though a DC bus rather than AC bus . In addition to that the solution was equipped with DC-DAS chargers with smart charging algorithm to ensure shaving of power peaks. Moreover, elektro introduced a of Time of use (ToU) pricing scheme that will make sure the setup will be profitable to the parking and the grid operator.

On 12<sup>th</sup> of April I travelled to Malmo, Sweden to pitch my startup idea. The competition was very tough as I was competing with two other established companies with around 5000+ employees. I managed to accomplish the 2<sup>nd</sup> place, however, I was fortunate to have fruitful discussion with the jury and the attendees who gave me some advices to further develop my idea.

Competition Video link: <https://drive.google.com/file/d/1jqR1U3xX7LhTjY9QBG7mS-01t3xVL6lt/view?usp=sharing>

Competition Link: <https://www.climate-kic.org/programmes/research-innovation/open-innovation-calls/parking-for-power/>



