

# CWSF 2016 - Montreal, Quebec



## Parth Vachharajani, Joy Shah

### The World's First Biological Power Plant

**Challenge:** Energy

**Category:** Senior

**Region:** Lambton County

**City:** Sarnia, ON, Corunna, ON

**School:** Northern C.I. & V.S., Great Lakes Secondary School

**Abstract:** The world is moving towards renewable resources for electricity generation. However, they are not available all day, creating a need for efficient electricity storage. One possibility is to convert electricity into a medium, like hydrogen, then using a fuel cell to regenerate the electricity. Fuel cells face many problems preventing them from widespread use. Methanol fuel cells used in tandem with microorganisms, provide a solution.

#### Biographies

Parth - Hi, I'm Parth Vachharajani a grade 11 student at NCIVS secondary school in Sarnia, Ontario. This will be my second year participating in the CWSF. I enjoy playing a variety of sports and was on my school's swimming and badminton team this year. In my free time I also enjoy playing tennis and golf. Aside from sports I volunteer at my local TvCogeco TV station once a week working on local TV productions such as TvBingo and OHL hockey. For my post secondary education, I'm planning on attending university and studying mechanical or electrical engineering. The inspiration for this project came when I was on the highway going to London Ontario...

Joy - Hi, I am Joy Shah from Corunna, Ontario. I go to Sarnia Collegiate Institute and Technical School (SCITS) and am in grade 11. I love to solve problems and really like math and science. I plan to pursue a post-secondary education in the engineering field. In school, I am part of Key Club, a club sponsored by Kiwanis International, and Reach for the Top, a trivia club. I am on the soccer, badminton, and tennis teams. Outside of school, I volunteer as a referee at the local regional First Lego League tournament and at CogecoTV. I have been participating in science fairs since grade 4 and this is the second time I have been to Canada Wide Science...

#### Awards

#### Value

Excellence Award - Senior - Bronze Medal Sponsor: Youth Science Canada	
Challenge Award - Energy - Senior Sponsor: Youth Science Canada	
University of Ottawa Entrance Scholarship Senior Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Ottawa	\$1 000
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
<b>Total</b>	<b>\$2 000</b>

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