

**ARIZONA STATE UNIVERSITY
CHEMICAL ENGINEERING PROGRAM
CHE 462
PROJECT 2 – team effort**

Atmospheric Very Efficient Cleaners Inc (AVEC)

TO: CHE 462 WORLD CLASS EXEMPLARY DESIGN ENGINEERS

FROM: J.R.Boss, Chair & CEO AVEC Inc

DATE: 2/4/19

SUBJECT: DESIGN FOR CO₂ REDUCTION FROM ATMOSPHERIC AIR

In 1997 an international meeting was held in Kyoto, Japan, 2012 in Doha, Bahrain and lately in Paris (the Paris Accord) to discuss the Global Warming trends and remediation policies to curb carbon dioxide emissions. AVEC Inc wants to join **with (avec) the Paris Accord spirit**. The climate change in global rising temperatures shifted weather patterns throughout the world. Currently, there have been articles urging the removal of 410ppm carbon dioxide from atmospheric air.

As an example, Carbon Engineering Ltd has developed a process for extracting carbon dioxide from air by using an air contactor, pellet reactor, calciner, slaker and CO₂ disposal. Estimated removal costs range from \$100 to \$250/ tonne by company estimators.

You will interact with your group but work alone on your section of the project to explore the business venture details to be proposed by AVEC Inc which will reduce the amount of carbon dioxide from atmospheric air. **The project objective is to minimize total carbon capture cost per ton (or tonne)**. Use a money borrowing rate of 6% with an equipment life of 20 years. The team combined effort will assure AVEC Inc of multitude design outcomes for proposal consideration.

Your final design report must be on my desk (aka Canvas) by 9:40 AM Monday April 1, 2019. Also, there will be **progress reports** due on **Monday February 11 and on Monday March 18** so as to help assure a strong steady pace of your dedicated participation.

