



Powerspan's ECO<sub>2</sub><sup>®</sup> technology is a scrubbing process that uses a proprietary solvent to capture 90% carbon dioxide (CO<sub>2</sub>) from the flue gas. Once the CO<sub>2</sub> is absorbed, the solution containing CO<sub>2</sub> is regenerated through heating to release the captured CO<sub>2</sub>. The product CO<sub>2</sub> is dried and compressed and then is ready for pipeline transport and sequestration.

- 1 Flue gas from an SO<sub>2</sub> scrubbing system enters the ECO<sub>2</sub> absorber, a packed tower. CO<sub>2</sub> is then captured through a regenerative thermal swing absorption process using a proprietary solvent. Flue gas flows up through the tower and is contacted by the CO<sub>2</sub> lean liquor flowing down over the packing. The liquor absorbs the CO<sub>2</sub> so that the exiting flue gas has a much lower CO<sub>2</sub> concentration.
- 2 In the regenerator, steam from the power plant provides the energy required to drive CO<sub>2</sub> out of the solvent circulating between the ECO<sub>2</sub> absorber and regenerator.
- 3 Residual water vapor is removed in the dryer and returned to the ECO<sub>2</sub> absorber.
- 4 CO<sub>2</sub> is compressed and ready for pipeline transportation for geologic storage or enhanced oil recovery operations.
- 5 CO<sub>2</sub> is reduced by 90%. Flue gas with the remaining CO<sub>2</sub> (about 1% concentration) exits to the wet stack.