approximately 12% above 1990 levels. Emissions per unit of production are 31% below 1990 emission levels.

Suncor has recently undertaken activities in alternate and renewable energy, specifically with the funding of wind-power facilities in Alberta. It announced its involvement in a major rain forest conservation project in Belize in partnership with the U.S. Nature Conservancy to provide carbon sequestration offsets. The Belize project has been approved by the U.S. Initiative on Joint Implementation and by the Belize government as a carbon sequestration project. In early 1998 the company negotiated a significant emissions trading deal with a U.S. electricity generator, Niagara Mohawk Power Corporation.

## Effects of VNRIs on Trade and Investment

Suncor is in the early stages of "going international" with its growth plans. A first investment is in an oil shale project in Australia. The project is a joint venture involving a \$275 million demonstration plant to produce 4,500 barrels per day (bpd) of crude oil, followed, if successful, by an expansion to 85,000 bpd within 10 years. The successful development of oil shale depends on both Suncor's technical expertise and its initiatives on climate change and environmental performance generally.

While most of its current production of natural gas and synthetic crude is destined for domestic markets, some non-upgraded crude is currently exported to the USA. However, all of the output from the significant Oil Sands expansion is to be exported to the USA, where it is intended to primarily displace Venezuelan crude imports. The growing importance of climate change is causing energy suppliers to benchmark their products against others. Suncor and other oil sands operators have sponsored independent assessments that demonstrate that synthetic crude has lower emissions per unit of production than the Venezuelan crudes being displaced. This type of product "life cycle" comparison is an indication of the role of environmental attributes in the competitive positioning of Canadian exports as issues such as climate change begin to assume importance to customers and shareholders.

## Conclusions

Suncor's core competency is the profitable extraction of oil from sand and shale. Faced with the perception that these kinds of operations are energy-intensive and inconsistent with combating GHG emissions, Suncor is proactively addressing climate change using a range of voluntary and non-regulatory initiatives. Intending to expand its sales on international markets and to exploit its oil sands technology offshore, Suncor's use of VNRIs, in particular its participation in the VCR, helps distinguish Suncor from its competitors. At this stage the effects of these initiatives are not known.

## References

Suncor web-site
Interview with Gordon Lambert, Corporate Director of EH&S, Suncor