



PNWIS AWMA Presentation

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**Goodrich Aviation Technical Services
Facilities Manager**

Goodrich's Global Warming Position

- Business Roundtable
- Climate RESOLVE Program

Climate RESOLVE Goals

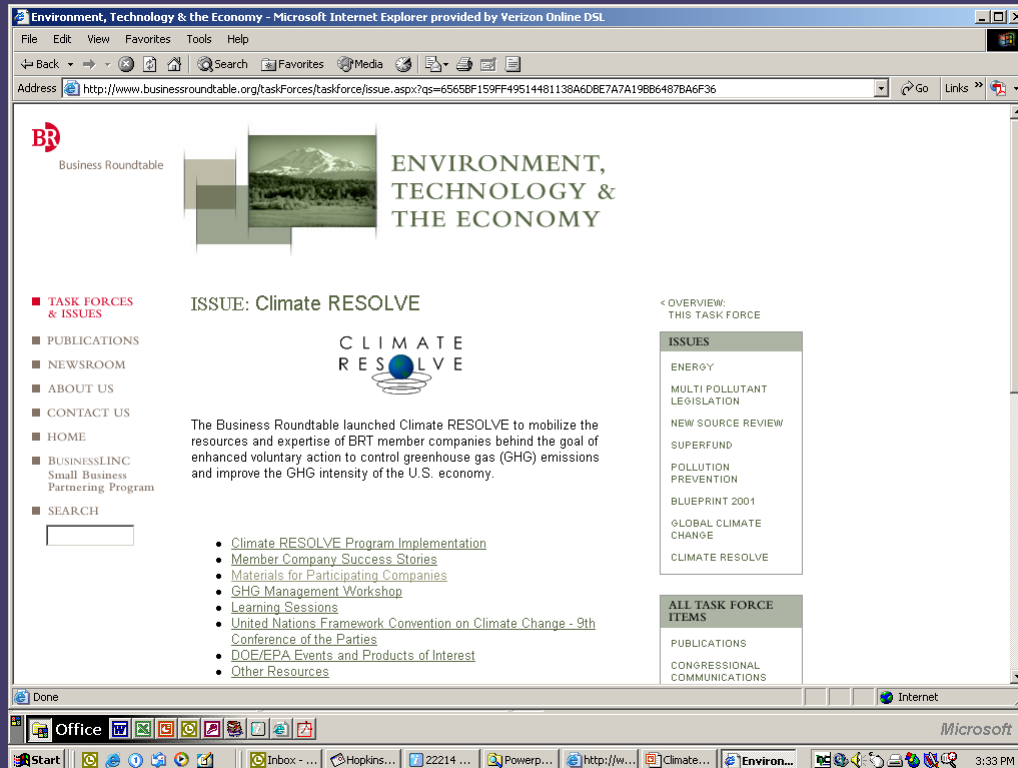
- 100% Roundtable member participation in voluntary actions to **reduce, avoid, offset**, and **sequester** greenhouse gas emissions
- Build on companies' existing voluntary programs and increase reporting
- Catalyze broader action by **companies in every region and sector of the economy**



National Geographic.org

Additional Information About Climate RESOLVE

Go to www.businessroundtable.org



The screenshot shows a Microsoft Internet Explorer browser window displaying the Business Roundtable website. The address bar shows the URL: <http://www.businessroundtable.org/taskForces/taskforce/issue.aspx?qs=6565BF159FF49514481138A6D8E7A7A19BB6487BA6F36>. The page content includes the Business Roundtable logo, a navigation menu on the left, and a main section titled "ENVIRONMENT, TECHNOLOGY & THE ECONOMY" with a sub-section for "ISSUE: Climate RESOLVE". The Climate RESOLVE logo is prominently displayed. Below the logo, a paragraph states: "The Business Roundtable launched Climate RESOLVE to mobilize the resources and expertise of BRT member companies behind the goal of enhanced voluntary action to control greenhouse gas (GHG) emissions and improve the GHG intensity of the U.S. economy." A list of links is provided, including "Climate RESOLVE Program Implementation", "Member Company Success Stories", "Materials for Participating Companies", "GHG Management Workshop", "Learning Sessions", "United Nations Framework Convention on Climate Change - 9th Conference of the Parties", "DOE/EPA Events and Products of Interest", and "Other Resources". A sidebar on the right lists "ISSUES" such as ENERGY, MULTI POLLUTANT LEGISLATION, NEW SOURCE REVIEW, SUPERFUND, POLLUTION PREVENTION, BLUEPRINT 2001, GLOBAL CLIMATE CHANGE, and CLIMATE RESOLVE. Another sidebar lists "ALL TASK FORCE ITEMS" including PUBLICATIONS and CONGRESSIONAL COMMUNICATIONS.



In 2000, Goodrich began focusing on reducing utilities consumption.

- **Utilities cost increases and downturn in the economy, combined with Sept. 11th, made us prioritize this effort.**
- **SnoPud explains rebate program for projects that reduce power consumption.**

- To reduce utility consumption by 5% each year from 2000 to 2005.



**Decided to target airhandler controls,
lighting and air compressors**

- **Examples of each area are:**

The Paint Bay is an example of a program put into action.

- The paint bay is 52,000 square feet with a ceiling height of 130 feet.
- The air handling capacity is 310,000 cfm, with temperatures of up to 100° required during certain paint operations



- Reviewed process to determine what was really needed to match different operations.
- Installed VFD's and controls to match equipment operation with process.
- Now we only operate 310,000 cfm during painting operations, balance of operations at reduced airflow.

- Electrical Energy Savings of 1,400,000 kWh/year were calculated.
- PUD rebate program allowed for a simple payback in less than six months.
- Equivalent to a 840 tons/CO₂/year.

- Too good for a natural gas rebate!
- Natural gas savings of 410,000 therms/year were calculated.
- Equivalent to 2,470 tons/CO₂/year.

- Shut them down for off hours.
- Savings estimated at 372,011 kwh/year for 3 airhandlers.
- 223 tons of CO₂/year.

- Went from 1000W to 750W fixtures on the Hangar floor.
- Energy savings of 890,000 kWh/year calculated, simple payback of 20 months.
- Equivalent to 534 tons/CO₂/year.

- Went from standard 30W fixtures to LED fixtures
- Energy savings of 13,000 kWh/year, simple payback 17 months
- Equivalent to 8 tons/CO₂/year.

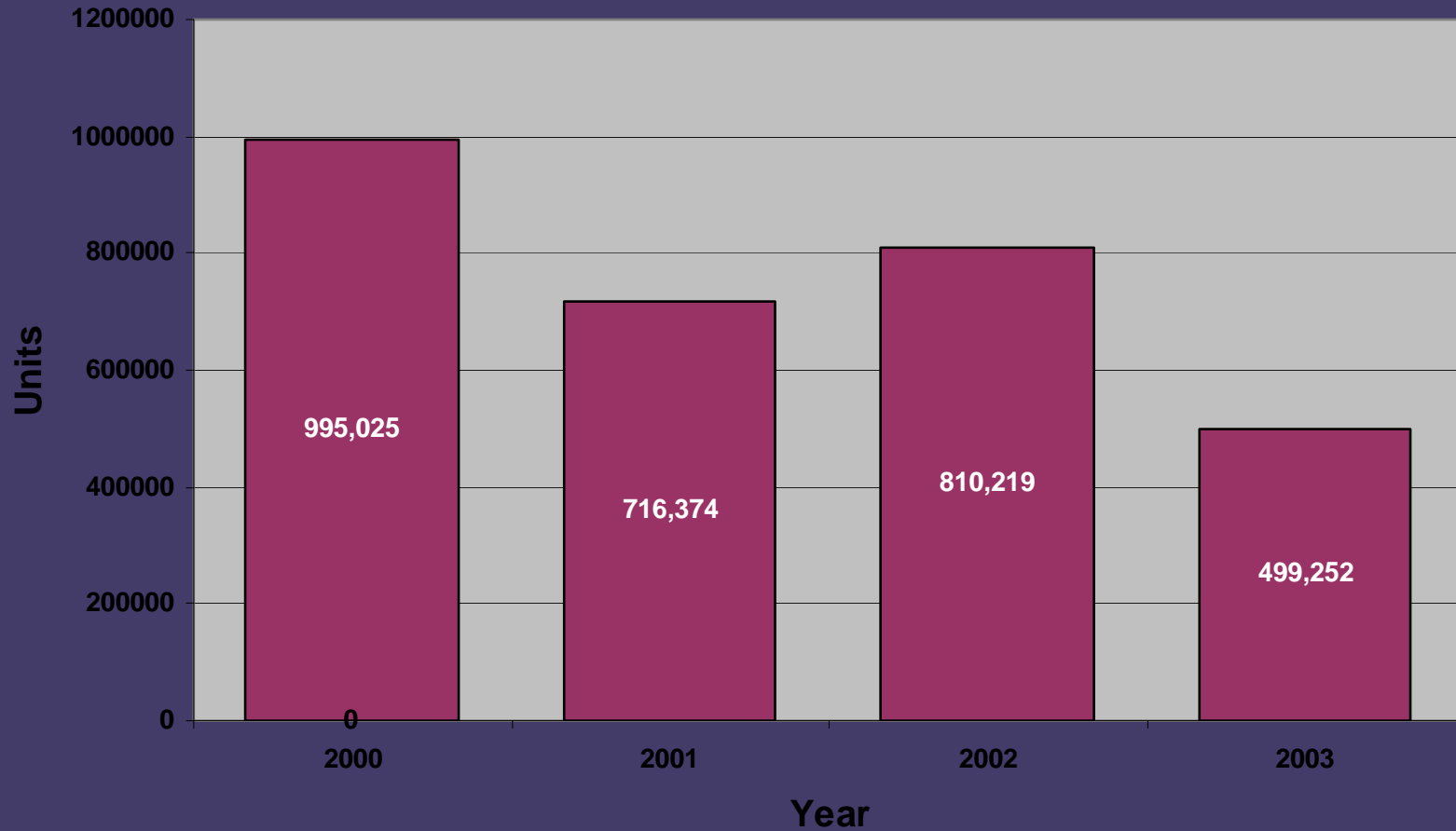


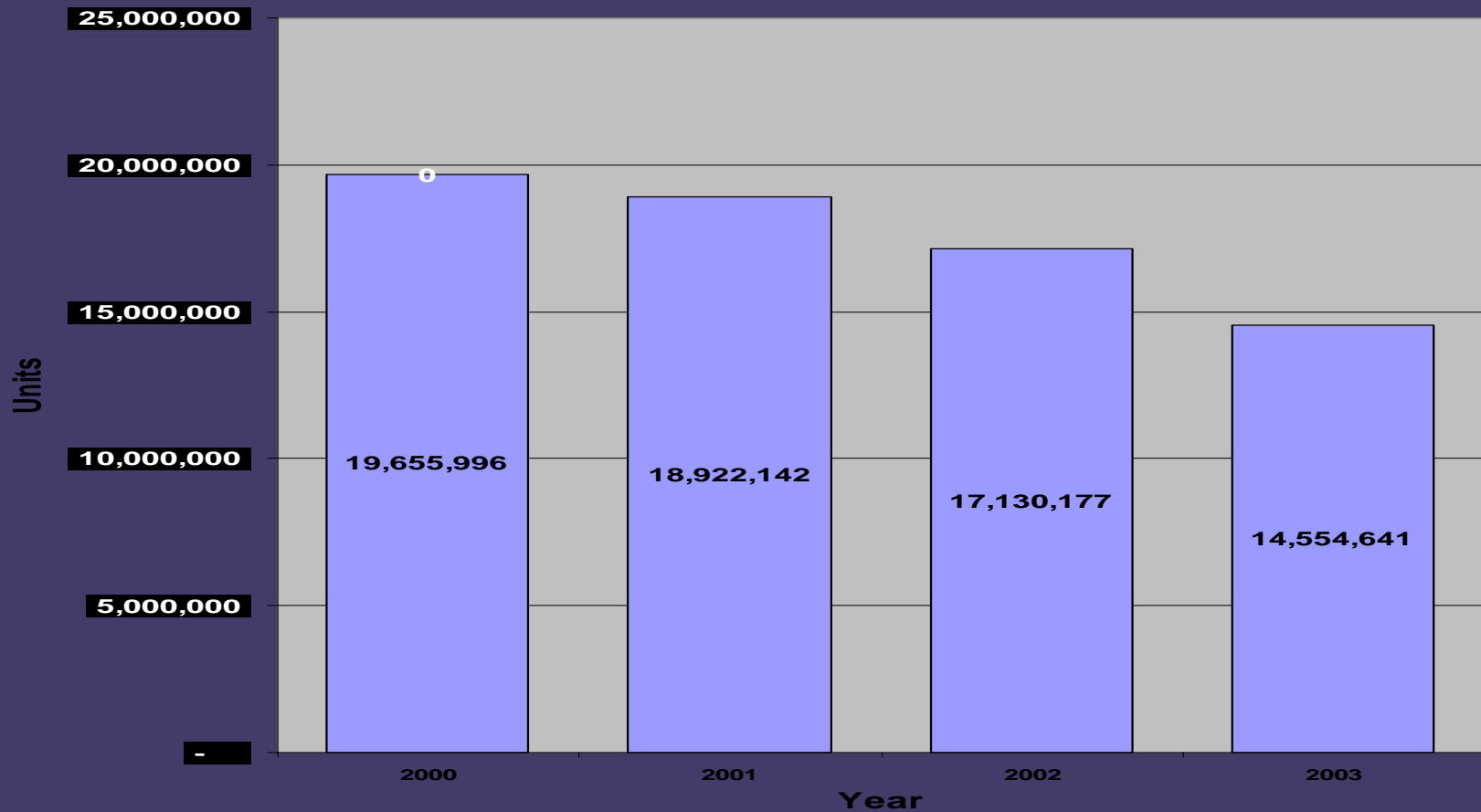
- Determined the air supply needed at each hangar.
- Went from a 125HP to a 50HP in one hangar.
- Energy savings of 388,000 kWh/year, simple payback of 36 months.
- Another hangar went from 2 compressors amounting to 350 hp to 3 compressors totaling 150 hp.
- This is a savings of 335,683 kWh/year.
- Equivalent so far to 434 tons of CO₂.

- Coat roof with a reflective coating.
- Surface temperature drops from 160° to 10° above ambient.
- Hybrid/Electric Car.
- Reduces gasoline consumption by 1,000 gal. annually.
- Fuel/Air ratio.
- Keep burners firing at optimum.

Goodrich Believes In Being A Good Neighbor!

- For World Environment Day, June 5, 2004, Goodrich gave a bulb to each employee.
- For each hour that the 1,500 employees use this bulb rather than an incandescent, greenhouses are reduced by 33 tons CO₂.





- 4,552 Tons of CO₂ saved per year.
- Represents a utilities reduction of 27% achieved since 2000.

- Are we planning on doing more energy reduction projects?

■ YES

