

FUTURE SHOCK

Supers, mechanics none too pleased with mandated RFG

By J. BARRY MOTHES

Officially, the acronym RFG stands for reformulated gasoline. But some golf course mechanics and greens crews around the country might have their own spicy interpretation.

As part of the 1985 federal Clean Air Act, RFG became mandatory starting Jan. 1, 1995, in all or part of 18 states with the worst ozone and air pollution problems. RFG supposedly pollutes less because it has lower levels of volatile compounds like benzene and contains an oxygenate like ethanol.

But complaints and anecdotal evidence against the new, technically "cleaner" gas have been piling up.

Some golf course mechanics are finding RFG yields lower mileage, less engine power and punch, more frequent tune-ups and nagging repairs on everything from greens and fairway mowers to weed-whackers. The gas is also less stable and many distributors recommend a storage life of no more than 30 days.

"The big surprise to me was mixed-gas items," said Eric Ingenbrandt, mechanic at the 18-hole Trenton (N.J.) Country Club (CC). "I have five Echo weed eaters (models SRM 2501, 2502) and on two of them had to do carburetor rebuilds because the diaphragms are wearing out. I've already cleaned carbon out of the mufflers once on all of them and changed spark plugs. I don't know how much can be attributed to this new gas ... but prior to this I'd only done one carburetor in five years, and that was four years ago."

RFG is being used statewide in Connecticut, Delaware, Massachusetts, New Jersey, Rhode Island and the



LOOK OUT BELOW!

The newly completed back nine at the Jim Fazio-designed Country Club of the Poconos (CCP) is so rugged, they've installed guard rails on cart paths at strategic locations — probably when the golfer encounters some of CCP's 100-foot vertical drops. "We're also going to install a cellular phone on the back nine for emergencies due to the remoteness," explained CCP General Manager Albert Bertha. The front nine at CCP has accommodated play for two years, but delays in securing state wetland permits postponed completion until this spring. The course held its grand opening — guard rails and all — over the Memorial Day Weekend.

District of Columbia. It is also required in metropolitan areas in parts of California, Illinois, Indiana, Kentucky, Maine, Maryland, New Hampshire, New York, Pennsylvania, Texas, Virginia and Wisconsin. The U.S. Environmental Protection Agency said some areas with less-serious ozone problems have elected to use it also. It was estimated 33 percent of all gasoline used in this country after Jan. 1, 1995 would be reformulated.

RFG — also known as methyl tertiary butyl ether (MTBE) — is considered "cleaner" gas. The content of toxic benzene has been reduced from about 15 percent to around 1 percent. But benzene contains lubricants that help engines run smoothly. Without these lubricants, engines run drier and hotter, which can lead to a variety of problems with carburetors, cylinders, spark plugs and head gaskets.

EPA estimates RFG produces 15 to

17 percent less pollution than conventional gasoline by reducing harmful vehicle emissions of smog-forming compounds and air toxins. It also estimates 1.3 million tons of ozone-forming emissions will be prevented in the first phase of the program from 1995 to 1999. EPA conceded in an early press release that RFG "may" reduce gas mileage on cars by 1 or 2 percent and, that "Certain oxygenates may not be compatible with small lawn and garden equipment engines, especially older ones."

"I'm all for pollution control, but I don't think anybody thought this out," said Harold George, head mechanic at 36-hole DuPont CC in Wilmington, Del. George oversees 300 pieces of maintenance equipment as well as 100 golf cars and 18 trucks. "It got forced on us, as usual. I don't think people realize how much small equipment can be

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Cost may exceed practicality with natural gas cars

By MATTHEW PHILLIPS

WASHINGTON TOWNSHIP, Mich. — First, they were electric-powered. Then came gasoline in 1971. And now, natural gas. Will the quest for a better-performing, more economical and environmentally friendly golf car ever end?

Recently, *Golf Course News* sampled the latest breakthrough in golfing transportation here at The Orchards, a year-old Robert Trent Jones Jr. designed course 30 miles north of Detroit. Built 3,500 feet above a Michigan Consolidated Natural Gas (MichCon) natural gas storage facility, The Orchards is a fitting venue for the world's first fleet of natural gas golf cars.

However, the sheer expense of exploiting this alternative fuel source — conversions run about \$1,500 per car, and fueling stations can be upwards of \$50,000 — may prohibit widespread use of natural-gas-powered golf cars.

The Orchards' unique fleet was the product of a three-way collaboration. E-Z-GO supplied cars to Modern Engineering, which converted the engines to burn natural gas. Once finished, MichCon stepped in to handle the fueling station and gas storage facilities.

The cars run on absorbed natural gas (ANG), a low-pressure gas fueling system. Environmentally, this system provides several benefits over its gasoline and electric siblings. Because of sealed fuel tanks and sealed refueling systems, there is no danger involved with accidental spillage, unlike gasoline-powered vehicles. In addition, non-methane hydrocarbons and carbon monoxide emissions are a fraction of those produced by gasoline cars. (Evaluating electric car emissions is difficult when you consider the electric plant's total emissions. They are believed to be higher than ANG-powered vehicles.)

The performance of the natural gas vehicle was simultaneously impressive and frustrating. Before the car goes anywhere, there is a three-to four-second delay while you wait for the engine to "spool up." This can be a source of ire for golfers eager to reach the resting place of their last duff. Once moving, though, the ANG vehicle performs on par with gasoline versions, providing good acceleration and impressive hill-climbing ability while surpassing terrain capabilities of electric cars.

In terms of economics, ANG-powered cars are significantly disadvantaged due to the newness of their technology. If the high cost of conversions and fueling stations can be overcome, ANG-powered cars possess a per-round cost advantage over their rivals. Whereas gasoline and electric cars cost roughly 25 cents per round to operate, early indications peg ANG cars at about 10 to 15 cents per round. Over the life of the car, which should be longer than gasoline or electric versions, the savings realized could be substantial.

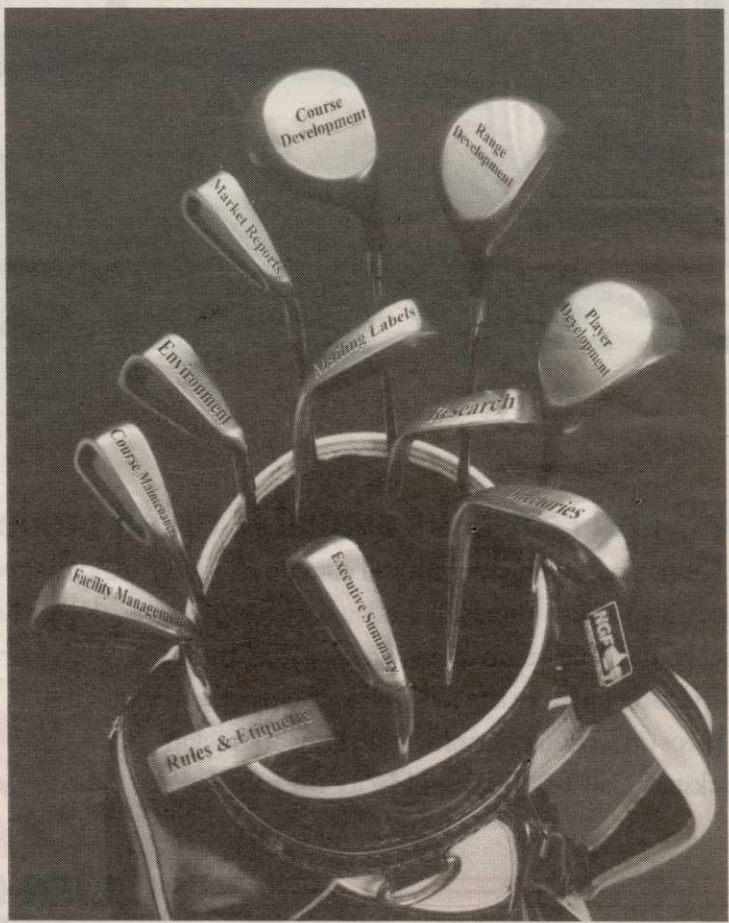
As always with new technology, there are kinks to work out and eventual room for improvement and efficiencies. Absorbed natural gas-powered golf cars are no different. That having been said, early indications show ANG cars to be an environmentally sensitive, strong performing and a potentially economical golf transportation alternative — attractive qualities to golf course managers everywhere, even if they like to walk.

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Leslie comment

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Ocean Course Purchase Agreements or otherwise, directly or indirectly, with any other person, entity or qualified organization participating in the auction, TOC agrees to grant ASNY \$150,000 to enable ASNY to complete the [environmental] study..."

The agreement, which included another \$100,000 to ASNY at the end of its study, was signed by ASNY President Ron Dodson and TOC Vice President Daniel M. McCormack on Sept. 9, 1993.

Of course, that promise of \$250,000 bit the dust with the other commitments. But ASNY personnel don't wish to work with people who have shunned, and some would say "used" them. (The first bid had to include an environmental group and VIT courted ASNY to join in the process.)

Ah, commitment. They say lack of it is a reason for the high divorce rate nowadays. Who would have thought inhabitants of Golf Nation would witness it in their own family?

Meanwhile, some may have been shocked at the seeming complicity of the government in this matter. The Resolution Trust Corp., which was such a stickler for involving environmental organizations in the original auction of the Ocean Course, apparently went into an environmental fog during the second sale. The RTC essentially trashed the original sale — to the partnership of the New York Audubon and VIT — because neither would agree to a unilateral RTC provision allowing other environmental organizations to get involved, if they disagreed with how the Ocean Course was being managed.

But in the second auction, the RTC's agreement contains absolutely no language regarding environmental management of

the course.

Spokesman Mike Fulwider simply stated that, under the Coastal Barrier Improvement Act, the RTC was obligated to market the property to environmental groups only the first 90 days (two years ago). Although several groups besides the New York Audubon had stated an interest, RTC took the position that it had fulfilled its commitment, Fulwider said. "Therefore, we were free to market it to the general public... Our primary concern is meeting our statutory responsibilities and recovering as much as for the taxpayers as we can in the sale of that property."

People in the golf industry, especially in recent years, have promoted awareness that they are the true environmentalists — the ones enhancing wildlife habitat hands-on.

One entity alone can now threaten all that goodwill.

Who cares if the RTC gets another black eye in this bankruptcy mess which was arguably caused by the government itself? The golf community should not have to pressure one of its own to stand on the environmental high ground. But, one person falls off that high ground and so do compatriots from Honolulu to Halifax.

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Like maintaining golf courses, designing them can be a stress on a family. It involves long days and sometimes long seasons for superintendents, long days and extensive travel for architects. Designer Barry Serafin, this month's Q&A subject (see page 27), puts his career and family in this perspective:

"Right now, all my projects are in central Ohio [where he lives]. I have a 6-, a 3- and a 1-year-old and I like to be home as much as possible. You have to keep your priorities straight. It's so easy to get so involved it takes over your life. Once that happens, it gets in

front of your God, in front of your family and things like that. Once your priorities get out of whack, so does your life."

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Referring to his association's request for proposals on the construction of putting greens (see story page 13), U.S. Golf Association Director of Research Dr. Mike Kenna says builders, architects and soil labs ought to back this. It should not be left solely in the hands of the USGA Green Section and superintendents, he argues.

"Who's involved in new golf course construction?" he asked. "In the world, research is done by the architects, not the maintenance men. In effect, [the industry] is doing the same as asking the plant manager (caretaker) to design a good furnace, etc. The USGA gets dragged into this because of our [green-spec] guidelines."

Kenna added: "There's very little research into the most important factor: Ensuring you have a good property to work with and that it's built well."

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There's no accounting for taste differences in turfgrasses, says Turf Merchants Inc. Vice President Steve Tubbs. "In Las Vegas, a desert, they are managing a New Jersey perennial ryegrass year-round. That's what they want. In Palm Springs, a desert, it's the opposite. They love Bermudagrass and want perennial ryes just to overseed and then to die out. And those two spots are only 200 miles apart."

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Texas A&M University's Dr. Milt Engelke, a noted plant breeder, commenting on breeding turfgrasses: "It sounds like wedding preparations. You hear phrases like 'The prospects are excellent,' 'There's a lot of potential' and 'Now we have to go through generations of breeding in characteristics.'"

RFG troubles

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affected and how much small equipment there is out there used by contractors and landscapers. All this stuff, especially on a golf course, is specialized high-dollar equipment.

"I think there's going to be a lot more fallout as the summer goes on here. If there are any problems with this in the long run, it could damage our fleet and you could be talking about a lot of money."

With golf course work crews everywhere facing the brunt of the summer heat, mechanics also note engines using the new RFG seem to have problems starting and running when temperatures hit the mid-80s and higher. On top of all this, prices for the new gas have been creeping up steadily the past six months.

"You're paying a little more at the pump and you're paying for nothing," said David Pellerin, head mechanic for six years at Portland (Maine) CC. Pellerin said he recently discovered a melted head gasket for the first time on a National triplex bank mower and has had to make constant adjustments to mowers and grounds carts.

"I believe the gas is here to stay, so we're going to have to make the best of it. We'll probably start by going to a higher octane."

Tinkey comment

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defining the objectives, creating a structure, selecting leadership, obtaining funding and tracking results.

In South Carolina the course owners worked together to determine the economic impact of golf operations on the economy of the state. They desired useful comparative financial information to run their courses, objective data on the cost benefit of the state's tourism expenditures on golf marketing and facts to support the importance of the golf industry to state employment and taxes. Primary data is collected confidentially from golf course operators throughout the state.

The initial program was a cooperative project with the South Carolina Parks, Recreation and Tourism Department (PRT), the South Carolina Chapter of the NGCOA and the University of South Carolina. The study, to be repeated this year and every one or two years thereafter, will continue to receive research funding through a marketing partnership program with the PRT Department. The data on golf course operations accumulated for the most recent study was extensive, including average revenues and expenditures by various categories, age of course, capital expenditures, and percentage of in-state and out-of-state rounds.

Many owners, private and public sector leaders as well as the general public are unaware of the significant role that golf plays with tourism, business development, contribution to the tax base and providing numerous well paid jobs. In South Carolina, the direct impact of more than 300 golf course operations — not counting the impact from related businesses, such as real estate sales, lodging, travel, food and other off-course purchases — to the state was \$644 million. With these related expenditures added in, the economic impact of golf has been widely reported as \$1.5 billion.

Each tax dollar spent on golf advertising produces \$74 in spending by golfers. The South Carolina PRT 1994 marketing and advertising budget, which is funded primarily from admissions tax paid on golf greens fees, drew an 18 percent increase over 1993.

The economic impact from golf course operations has added more than 14,000 full-time jobs for the state, with a payroll for those employees of more than \$227 million. Golf generates \$5.7 million in direct taxes and over \$16.7 million in combined tax revenue.

"Attracting more golfers means more jobs, more income and more tax revenue for the state," acknowledges South Carolina's Gov. David Beasley.

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