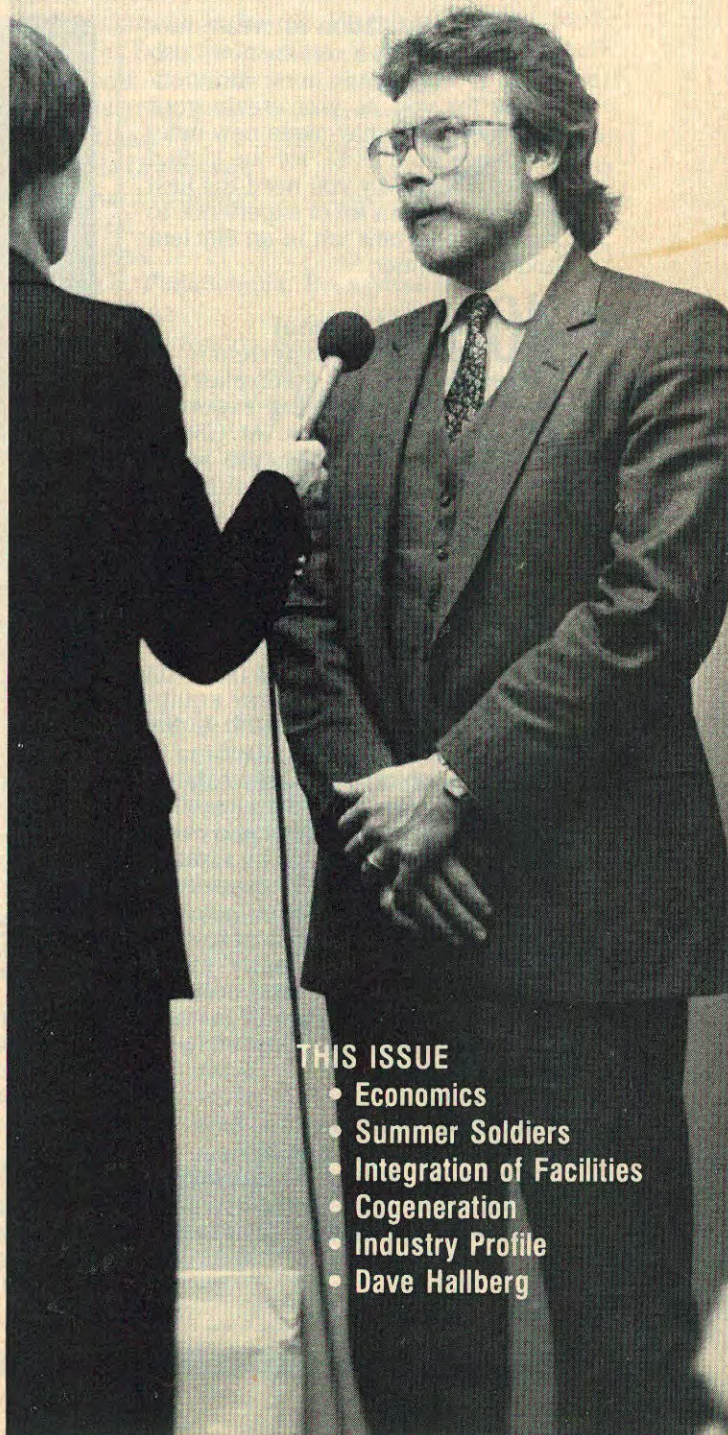
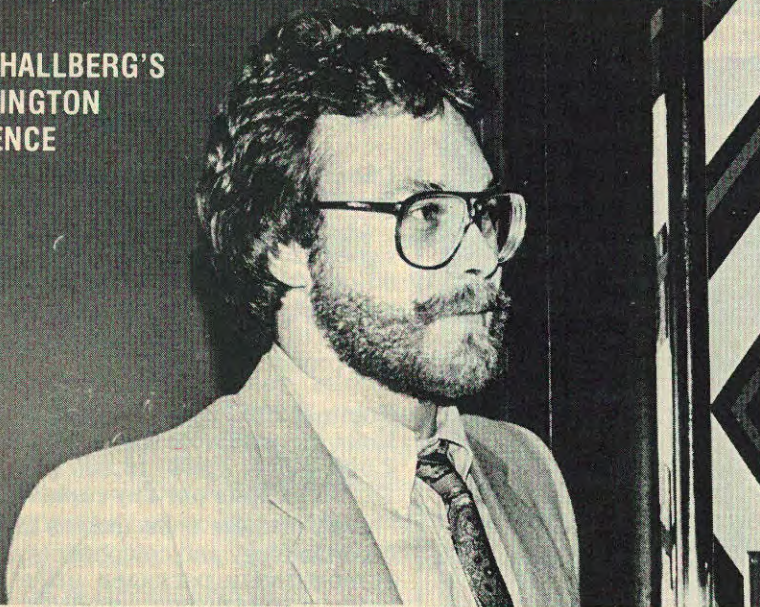


gasohol U.S.a.

JULY 1981

VOL. 3 NO. 7

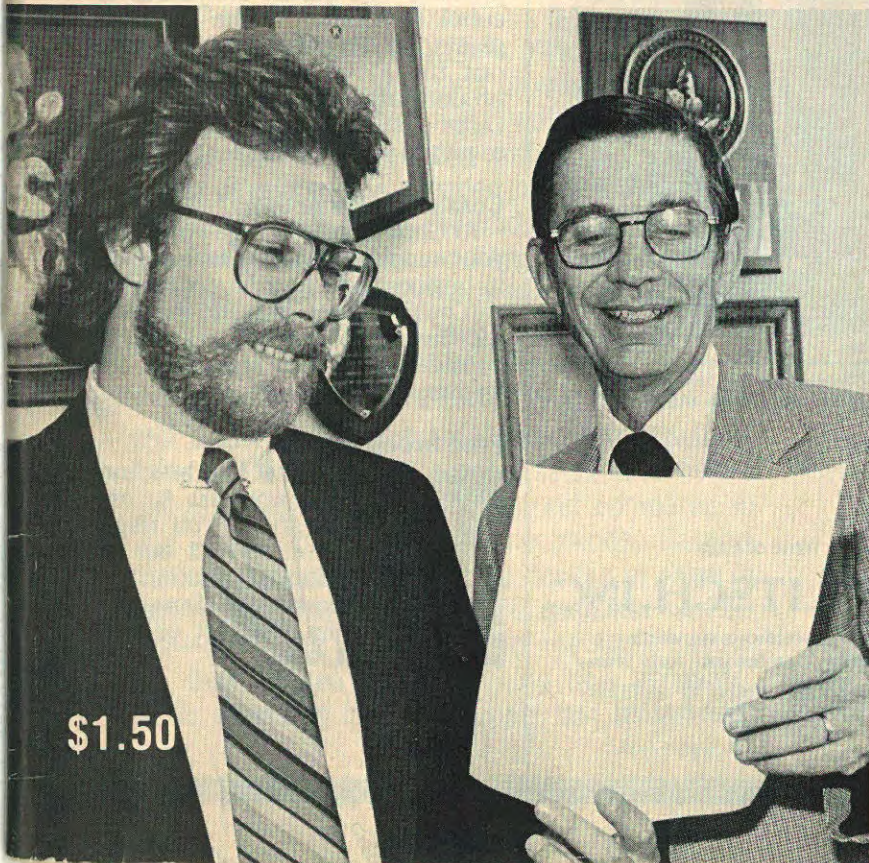
DAVE HALLBERG'S
WASHINGTON
PRESENCE



THIS ISSUE

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INTERVIEW: Dave Hallberg, and a presence in Washington



Dave Hallberg, fuel alcohol trade spokesman and President of the Renewable Fuels Association in action in Washington.

When Congressman Berkley Bedell was handed a plaque by National Gasohol Commission during the Myrtle Beach, South Carolina meeting of that group late last year, the Congressman turned to his young assistant and said, "This award really belongs to Dave Hallberg." Everyone could see that Bedell was sincere, for Dave Hallberg had been the flywheel and the balancewheel in getting things done through his Congressional office. Late last year, Dave Hallberg took the bull by the horns and founded Renewable Fuels Association, an industry-supported organization developed for the purpose of giving fuel alcohol a presence in Washington. For this role, Hallberg had become eminently qualified. He was born and reared in South Dakota. He came to Washington to study international relations at Johns Hopkins School for Advanced International Study. He duly earned a master's degree, and in the process worked for Senator Abourezk. Later he took a position with Congressman Berkley Bedell from Iowa as legislative director and administrative assistance. In this role he, indeed, earned the right to be called Mr. Fuel Alcohol U.S.A. This taped interview updates both Hallberg's work and the status of the fuel alcohol industry.

GASOHOL U.S.A. Mr. Hallberg, in the six months Renewable Fuels Association has been in existence, your organization has certainly been credited for giving the gasohol industry an official presence in Washington that we really haven't had before. What has this really meant so far?

HALLBERG. It has been an exciting six months. As you know, we started out the year with a couple of big

body blows to the movement, at least in terms of what had been set in place by the 96th Congress. We opened our doors on the 5th of January and almost immediately, of course, we were hit with the announcement that Secretary Block has frozen the 15 business and industry loan guarantees that had been made in 1980 by the Carter administration people for farmer's home loan guarantees. That is in the process now of being worked out, and most of those projects have been released. That was our first success. But it was the precursor of some bad news.

GASOHOL U.S.A. The recession attacks by Mr. Stockman?

HALLBERG. Yes—in the budget. And since then we have been pretty well preoccupied with that effort and we've been very successful—more successful in getting those funds back than with any other program targeted for recession.

GASOHOL U.S.A. When you say recession, what you really mean is knocking out programs previously approved?

HALLBERG. That's right. The monies that were appropriated for the Energy Security Act Loan Guarantee Program, which was over a billion dollars, had already been appropriated and in a couple of instances, such as in the DOE program, many projects had gone almost to the end in terms of qualifying for that money. So it was a very retroactive elimination.

GASOHOL U.S.A. What prompted you and your associates to form this Renewable Fuels group?

HALLBERG. As you know, I grew up in South Dakota. I came from a rural background of sorts, and I came to Washington to get my degree in International Relations at the Johns Hopkins School for Advanced International Studies. My interest in renewable energy came about because I realized that our foreign policy was being dangerously held hostage by the fact that we were so dependent on the Persian Gulf area for our oil supplies, and I felt that was a terrible mistake. I also felt that renewable technologies, especially alcohol fuels—which had made liquid fuels contributions—were being dangerously under-funded and that we had to rely on those because they had a near term potential. So I spent four years on the Hill working in that area—a year in the Senate side and then three years, of course, with Congressman Berkley Bedell. And we got very active in the legislation in those areas. I was with Bedell toward the end of last year, and we got through the election successfully, but I was interested in trying to get more involved in the private sector because I felt that was where the fuel alcohol push was going to have to come from. I also felt there were some good firms out there that did want to put the resources behind alcohol fuels. And we found them. We found firms like Boeing

Engineering, Publickers, E.F. Hutton, L & A Engineering—firms that had good reputations in other areas, and we brought them together at Myrtle Beach. I think it was an important step, and I hope it is one that we can continue to enlarge upon because that is the way this industry is going to continue to grow.

GASOHOL U.S.A. Does it look like firms now supporting Renewable Fuels Association are going to stay in place? Will there be others come forward to give added support? As you know, support for a group like yours gets to be the lynchpin for continued operation.

HALLBERG. That is very true. I wish I could answer that question for sure. I hope that what we've done here in the last six months has demonstrated to everyone that we can deliver. I certainly hope, too, that people realize we're needed in Washington. Let me give you an example. I've testified in front of both Finance Committee and the House Ways and Means Committee with reference to the provision in the administration's tax bill which would literally eliminate the use of limited partnerships as a device for raising equity capital for fuel alcohol projects. As you know this would particularly impact on the small and medium size projects, and I think that people are beginning to realize that unless there is a group such as ours here to monitor that sort of thing and bring together people from all over the country to put pressure on their Representatives and Senators, that we are going to lose all sorts of battles. Basically we are battling a thousand right now, and I think that is important—and unless we gain recognition for our trade record and get financial support behind it, we're going to lose that sort of medium, and I think it would be very costly for everybody involved.

GASOHOL U.S.A. What is the status of HR-2400, the Economic Recovery Act of 1981?

HALLBERG. As you know, that is the overall tax bill proposed by the administration and it is now in the process of being marked up. The particular provision that most affects our industry—as well as many other alternative energy industries—is the section 203g of that bill, which would subject limited partnerships to the at-risk rule when they are trying to receive investment tax credits and energy investment tax credits. It has a very complex section, and it is pretty hard to explain, but it basically means that limited partnerships would lose the attractiveness that they have for this industry and it would virtually destroy our ability to raise equity capital from that direction. What we have been able to accomplish in the last five or six weeks of lobbying is this: two days ago the Secretary of the Treasury made a very significant concession in terms of abandoning the position that called for total disallowance of the at-risk provision and they have now allowed it when a project uses funds from either a bank, savings and loan institution, or insurance company. It's a major concession on the part of the administration, and we believe we can get that expanded to areas such as pension funds and S.B.I.C.s and others which will be important to our industry. It has been a pretty tough fight.

GASOHOL U.S.A. How does the so called Windfall Profits Tax figure in all this?

HALLBERG. Well, the energy investment tax credit was first born in the Windfall Profits Tax Act in 1980, and this, of course, would dilute that unless we are able to successfully get it changed—which I am confident we will. There were a lot of tax advantages in the Windfall Profits Tax Act, and I think that's going to be one of the major focuses of the association, that is in the tax incentives areas, because that is where the administration appears to be willing to allow incentives to survive. I think there are less burdensome regulations on the private sector using the tax incentives approach. In addition to the energy investment tax credit, there are several other tax benefits that we need to look at more carefully.

GASOHOL U.S.A. What are those?

HALLBERG. There is one, the 40 cent blender tax credit, of course, which was provided as a compliment to the 40 cent exemption on each gallon of gasohol. This can be taken at the refinery level for each gallon of alcohol used—if it is anhydrous. Now, that is very important for a couple of reasons. As you know, refiners are looking more and more at ethanol as an octane enhancing agent. The Ethyl Corporation came out recently with a report that rated it as second only behind methyl tertiary butyl ether (MTBE) as an octane enhancement. I think it is exciting to see the refiners beginning to look at ethanol as an important octane enhancing additive.

GASOHOL U.S.A. What significance do you attach to the fact that some of these firms seem to be using ethanol as their octane enhancer, but they don't like the idea of calling it *gasohol*? They are inventing all kinds of terms which are starting to show up in the market. Phillips has *Super Unleaded with Ethanol*. Cities Service has *Unleaded Plus*. Even Diamond Shamrock is thinking of *Premium Unleaded with alcohol added*.

HALLBERG. Well, I think it is very significant. First of all, I think when we began to use the word *gasohol* several years ago, it was a good way to go because here was a term that people could relate to, one they could recognize. It was easily explained. And it contained a standardization approach, an implication that everything was correct. On the other hand, we forgot that *gasohol* represented just one use of alcohol. In other words, we can use ethanol either in *gasohol*, or we can use it 5% for octane enhancement. We can use it neat in engines. We can use it in the chemical industry, or for a number of other purposes. I think it is important that we don't lose sight of that because I think one of our greatest strengths lies in the flexibility of both amount of production and different end uses. It seems to me that while there may be some changes and some adaptations, it is a healthy thing. People are beginning to recognize that *gasohol* is not the only use for ethanol.

GASOHOL U.S.A. In your opinion, what is going to

INTERVIEW: Dave Hallberg . . .

happen to the term *gasohol*? Will it evolve like *teamster*. Nobody drives a team anymore, but we still use the term *teamster*. Do you visualize that the term will survive because its meaning evolves?

HALLBERG. Well, that's kind of a loaded question, I guess, but certainly not the one that is going to make it happen. It is a good question. First of all, there are some industry trade reports to the effect that some major oil companies are going to end their labeling of alcohol blends as *gasohol*. They are going to use the terms you mentioned. This may be an indication of what is going to happen to the generic term. It is used, it is going to be used more in the independent stations. I think the use is going to be more selective rather than all encompassing. There are different reasons for this, but I think it is healthy. I think we need to start talking about alcohol fuels or renewable fuels or synthetic fuels. But, we don't want to lock ourselves into the impression that there's only *gasohol* because you don't always have to use alcohol with gasoline.

GASOHOL U.S.A. But you don't see any diminished acceptance of the "gasohol" concept?

HALLBERG. No, I don't think so. I think the only thing that may hurt fuel alcohol would be a substained existence of the present glut, which I don't think is going to happen. You are putting pressure on blenders

and retailers to use alcohol as less of a displacement function than for octane enhancement. They are trying to get rid of their gasoline since it costs them so much to store. If that were to continue then you may have a trend toward less use of the full 10% as a displacement. I think we would have to see that for a while before we could conclude that it was going to occur on a large scale.

GASOHOL U.S.A. Of course, gasoline does not store very well for very great periods to time. It may be that they will be required to use alcohol to salvage it.

HALLBERG. That's an interesting thought. I think the whole glut situation thing is a misnomer. Today in the *Washington Post* there was some discussion about all the undercurrents in the Gulf in the wake of the Israeli attack on the reactor in Iraq. I think we have to remind ourselves how tenuous the supply line really is. This temporary situation of an oversupply is *very temporary*—just that! We have to be prepared to react to a shortage interruption very soon.

GASOHOL U.S.A. Is there any possibility that fuel alcohol, either as *gasohol* or as neat alcohol or farmer's alcohol, can get to the point where it can move into the market maybe a penny a gallon under regular or unleaded?

HALLBERG. Absolutely, I am convinced it is going to! It may not happen as soon as I had expected because we have this unusual situation of Saudis overproducing for certain reasons. But if you look at the curves—and despite what some of the other reports show—it seems to me axiomatic that the gasoline curves are going to rise much more steeply than the alcohol curves. I am convinced that *gasohol* is going to come into the market at less than gasoline, and quite soon.

GASOHOL U.S.A. Of course, we're faced with this Iraq situation. We have atomic plants all over the United States, any one of which could be hit by an off-shore missile, and it is a little late now to second guess the fact that they should have built them a mile underground.

HALLBERG. Yes, it is too late for that. I think you have raised an important point which is—this industry, the alcohol fuels industry, has gone far far beyond the point where it started, namely as a way to shore up and stabilize agriculture income. I still think that is an important benefit of fuel alcohol, but I think we have to look beyond that. First of all, fuel alcohol is really going to make a significant contribution to our liquid fuel supplies. It is not going to be a panacea, but it's a significant contribution. Secondly, I think it has an important national security roll. That is an issue gaining a higher profile here in Washington during the last six months. It is a lot more attractive to members of Congress and the Senate to start talking about alternative energies as a national security requirement. Right now, because of decontrol, major oil companies are starting to move out of rural areas. In doing so, agricultural



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cooperatives are being asked to take up more of the supply slack. Now, ag co-ops do not normally have their own sources of crude, and they have to go into the world oil spot market to buy their crude. They also have the refineries geared to use chiefly sweet crude. In other words, less sulfur, and there is beginning to be more and more sour crude on the world oil spot market. So co-ops are having to pay premiums even in the glut situation for the crude they buy. I think that is serious, because when the next interruption or shortage occurs, it's going to be the rural areas that bear the brunt of the cost and the interruption. I think it is going to be interesting to watch. As you know, one of the refineries in Illinois, Cooperative Refineries, went out of business a few weeks ago. As this attrition occurs, more and more pressure is being put on rural areas, and I think technologies like fuel alcohol are going to be the answer. So, I think we really have to look at that in the context of national security as well as economic development.

GASOHOL U.S.A. Is there any discussion on the Hill about the unique storability properties of alcohol compared to gasoline for the national defense—this in terms of stock piling?

HALLBERG. Yes. There is in the context that we have worked with Senator Percy's office and some others. As you know, Senator Percy has held hearings on strategic alcohol reserves. In fact, a letter was sent to Secretary of Defense Weinberger, who responded saying that he felt the idea has merit, and it was not automatically dismissed. The use of a strategic alcohol reserve program, first of all—while being technically feasible—also has a lot of benefits in terms of not only national security balance but for use as a market prop for alcohol production. If there is ever an inventory buildup situation, we can put the inventory into reserves with a purchase agreement program, and the market price would stay stable. We are pursuing that sort of thing, and I would hope that we will be able to pick up a little bit more speed once we get some of these near term threats taken care of.

GASOHOL U.S.A. Moving around the country, we see a lot of new plants coming on. They are not big in terms of being 6 to 20 million gallons. They may only be 1.5 million gallons and that sort of thing. Most of them seem to be able to move their production in the immediate environs, which brings us back to one thing—this business of capital formation. We have had a change of atmosphere in Washington and everybody knows the umbilical cord has been cut—but you don't see any diminution of the need for capital formation assistance? Is this the point of what you are saying?

HALLBERG. Well, I think we need innovative ways to accomplish this capital formation. I don't think it is politically realistic for us to expect additional loan guarantee funds beyond which we were successful in getting restored. As you know, we got \$271,000,000 worth of budget authority restored to DOE with 3 to 1 leverage, which makes \$813 million, and \$250 million

into USDA—so we got a little over a billion dollars restored. When you talk to some of the investment companies such as E. F. Hutton, the feeling is that this amount of money should be enough to catalyze the construction of first generation plants. In turn this performance should convince the financial community of the viability of this industry. My own feeling is that this is correct, and that we need now to look for ways in which we can leverage private sector dollars for capital formation, and do it in the private sector where there is less bureaucratic interference. We have a couple of ideas for doing that. One is to use a program which is now in place and has been very successful for the last 25 years—the so-called SBIC program, or Small Business Investment Company. It is an approach in which private sector investors are required to put up \$500,000 of their own equity, and then the federal government will leverage that money four times if they adhere to certain standards. In other words, if you had a \$1,000,000 or private sector capital base, the federal government would put up another \$4,000,000, so you would have a \$5,000,000 kitty with which to make venture capital assistance loans and grants.

GASOHOL U.S.A. Is this guarantee money? Or, is it actual money?

HALLBERG. No, this is actual money. The program has been successful because the management of the private sector base—because of personal exposure—has been very good. There have been very few failures. This has resulted in some very good loans and the start-up of new firms that might not otherwise have received loans from the banking community.

GASOHOL U.S.A. So unless the government ends up holding the bag, it really doesn't cost the government anything?

HALLBERG. Right, it doesn't cost the government anything. In fact, it has been figured that the benefits to the taxpayer are very good because of the job creation involved and because of the increased tax revenue that results from new businesses. What we're talking about and what we're going to work on is the introduction of legislation—and I think it is passable—to create a new class of SBIC, for instance one called ARESBIC—A Renewal Energy SBIC. Perhaps we can increase the leverage capability, make some incentives in the debenture policy, what have you. But, I see a day when we can have numbers of those all around the country which are able to then make loans to fuel alcohol projects and get them over the hump.

GASOHOL U.S.A. At the same time, the banking industry does not consider fuel alcohol production a bankable proposition?

HALLBERG. They don't right now. I am a little disappointed in that, but then I guess if you look at the track record we have had, it is somewhat understandable. Banking is a conservative industry. I do think one thing is going to happen in the next one or two years. As these

INTERVIEW: Dave Hallberg . . .

loan guarantees are implemented and made, and the plants are constructed, as more evidence is given of the volatility of the Persian Gulf area, and as there are more problems with gasoline supplies, there is going to be an increased awareness on the part of the banking community that not only are these plants necessary for energy, but that for their own communities they are going to have such projects in order to keep economic vitality afloat. So I think we are going to see increased support from the banking community for these projects in the next two years.

GASOHOL U.S.A. But when you have the federal government blow warm and cold, doesn't this start people worrying about government credibility, about whether government will honor deals already made?

HALLBERG. I think this is a valid concern. In fact, that was one of my greatest problems with the recision action. It was a retroactive elimination, and it did a great deal of damage to the psychological atmosphere surrounding these projects which already are speculative. I think it was bad and that's why I think it was very important that we won this recision fight, not only for those projects scheduled to receive loans, but for everybody in this industry because it is going to help shore that up. One note of optimism I have with reference to how the federal government is going to approach our industry in the future is the President's appointment of the DOE Office of Alcohol Fuels Director. He is one of Reagan's very good friends, James Stearns. I have talked to Mr. Stearns many times during the last several weeks. I am very impressed with his businesslike approach and his attitude. I see a strong desire to build a program. Now, it is probably not going to be on the basis of loan guarantees. I don't expect that. I think we are going to see the fact that his close friendship with Ed Meese in the White House and with the President will help him to be very effective. I am looking forward to his coming. I do see more positive signals from the federal government to the financial community. This will cause them to see the fuel alcohol industry as an important component of our energy supply system.

GASOHOL U.S.A. As you know, agriculture still is the biggest consumer of gasoline, oil, and fossil fuels in general. It seems that if agriculture consumes its own production to a large degree, this would be one avenue to getting a par exchange for crops produced. What can the government do to make this rural sector move along faster on fuel alcohol?

HALLBERG. Well, I think it is a key question, because you are absolutely right. There's two ways to look at it. You have to increase greatly the prices the farmers receive, or on the other hand costs have been skyrocketing and prices have remained fairly constant—and that's where the squeeze is coming from. A large part of the farmer's skyrocketing production costs have come

from energy. Now, if we can increase the farmer's ability to produce his own energy and then sell it to others, that's going to greatly cut down on that one side of the equation. I believe it's got to happen and I think it's going to happen. One of the problems we have run into, I think we made it sound too easy. A lot of people became disillusioned. Some of them might have been burned by disreputable people. I think we have to recognize the fact that fuel alcohol production is still going to take some work. It is going to take some money to work the bugs out of the small, medium scale unit. But it is going to happen. We see improvement all the time. I think there is going to be integration of renewable technologies—alcohol with methane, hydroponic greenhouse units, wind. All these things together are going to create a really economic unit that's going to bring a real boost to farm income. I think further that fuel alcohol is going to make people more aware of the attractiveness of living in rural areas. I see a real stabilization and invigoration of rural income in the next 10 to 15 years once we bring renewable energy technologies back into the picture.

GASOHOL U.S.A. Over the last four or five months, there has been a considerable upbeat in coverage on fuel alcohol from a negative point of view. In the process, all the old canards have been run by the horn again—the energy equation, the food versus fuel argument, and so on. How damaging do you assess that as having been?

HALLBERG. It's definitely had some impact and I guess the scary part about those reports is that the impact is greater in Washington because the policy-makers, the staffers who work for Congressmen and Senators, they don't have an opportunity necessarily to see the good things that are happening, but they do read papers.

GASOHOL U.S.A. They do read the *Washington Post*, the *New York Times*, and the *Wall Street Journal*?

HALLBERG. That's right. They derive their opinions in great part from those sources. So, it has been damaging. I am also encouraged by the fact that things haven't folded up because of these reports. I am hoping that journals like *Gasohol U.S.A.* will keep on pointing out the good things that are happening. Finally people are going to become aware of the fact that we are a fledgling industry, but that we are making great strides. We are starting to get better press, and I think it is going to improve.

GASOHOL U.S.A. Where do you go from here? What's your program?

HALLBERG. First of all, we are an industry. The Renewable Fuels Association is here to make it a profitable one and a stable climate for investment. But as Alvin Toffler says in his book, *Third Wave*, we are in the midst in this century of transition to a new set of values, a new set of structures, as it were. That means going back more toward decentralization in energy and

everything else. I think one of the most important things about fuel alcohol is that it is a wedge for a concept which is that Americans can be more self sufficient, they can improve their national security by dispersing their facilities, they can improve their agricultural system by using less water. Fuel alcohol is a concept as well as an industry. I feel our role here in Washington is to try to merge the two together. We have to be able to also consolidate ourselves better with the grassroots representation so that we can apply what we need to have done in Washington to the grassroots and have the implementation work. It is a two-way street. Now, we hope to be very active in the areas you have mentioned—capital formation, marketing. We are going to make sure the 4 cent exemption stays in place. Perhaps we can make the 40 cent blender tax credit non-taxable. We want to work more closely with the automotive companies and get them to come up front and active in producing pure alcohol power vehicles. We want to get the federal government more involved in purchasing gasohol and pure alcohol. We want government to test fuel alcohol for aviation, like Gordon Cooper and Bill Paynter have been trying to get them to do. We need to use the federal government as the facilitator between conceptualization and commercialization. That has always been the case with any important industry and it is certainly the case with alternative energy, and that's why I think we have to be here. We've got to make people in the industry aware of our existence and willing to support us with some hard

dollars because that is the only way to exist.

GASOHOL U.S.A. There have been reports in the various public prints that your organization had been approached by National Gasohol Commission for possible merger. Do you still see a joint roll for these two groups, or will each organization go its own way?

HALLBERG. We still have dialogue going on. I am not a prophet. I don't know what the precise structure could be, but I do know this—there is a symbiosis between a Washington presence and the movement in the grassroots areas. I think that has to be utilized and that it is going to be counterproductive if we do not work together closely. I am going to do everything I can to make sure that we do work together because you can have a company like Texaco belong to the Renewable Fuels Association and want to have Washington presence, but it's also important for them to be able to have the marketing programs onward and upward out into the rural areas. I think that we can't separate that.

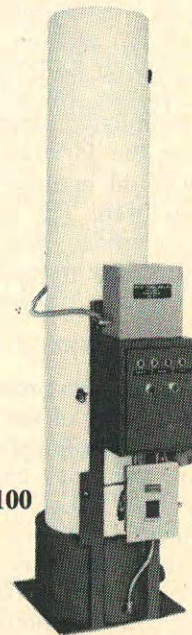
GASOHOL U.S.A. Certainly fuel alcohol can enjoy a Washington presence through your organization, but the fuel alcohol movement also requires a presence in the countryside. Now is it a correct thing to say that you really can't do both? You can't be doing the country job and the Washington job at the same time?

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INTERVIEW: Dave Hallberg . . .

HALLBERG. That's right. I think that is correct. I think we can grow and expand and we will do that, but there is a way under a council structure to have both groups operating in a very businesslike efficient way. I think that is going to happen in the near future. This industry, as you know, was born really in Nebraska, Iowa, Illinois, and the grassroots is what gave it impetus. You can't have a marketing program without making sure that you preserve the 40 cent blender tax credit or that sort of thing. In other words, the two are dependent upon each other.

GASOHOL U.S.A. You've also got to preserve the customer's willingness to use this product and to understand the economic ramifications—why it is important to use homegrown fuel as opposed to the imported fuel as much as possible. This role has got to be carried by someone in the countryside, and you really

can't do it from Washington. Are you saying, Dave, that the country is just a little bit too big for one person or one group of people to have a handle on everything?

HALLBERG. No question. I absolutely agree with that. I think that one of the benefits of the people involved in this industry is that they are all really pretty unselfish. I think they are interested in making this work for the greater good. I am very upbeat about the whole thing.

GASOHOL U.S.A. I guess you have a good example there in your own office, haven't you—Dick Merritt?

HALLBERG. That's right. Dick is super-super help here, and like he says, he and I kind of have a father-son relationship. This is a good example, and I think continuity is important. We need to keep sharing and we need to keep the dialogue going. I think it is going to happen.

'NO SUMMER SOLDIERS'

from page 8

Order mandating the use of gasohol in the federal fleet when the fuel can be purchased at a reasonable price.

- Brazil-made ethanol cars are being imported into this country.

- An increasing number of cars, trucks and tractors are being converted to 100% formulated alcohol fuels.

- We are learning a great deal about the value of formulated alcohol fuels and these new fuels will soon find their way into the market; for example, Petracol—a methanol based fuel additive is being test marketed in Utah.

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- The gasification of woody biomass to produce methanol or ammonia.

- The planting of massive hybrid tree shelter belts to provide the biomass needed for the integrated systems, and to protect the top soil and the ground water.

- Solar heated greenhouses using the CO₂ off the fermenters to enrich the growing environment and thin stillage off the distillation columns to provide part of the nutrients for the crops.

- Energy, top soil and water conserving cultivating practices.

- The use of cover crops, organic material, crop rotation and other integrated pest management practices to reduce the need for chemical pesticides.

- The use of biological fertilizers and compost to reduce the need for chemical fertilizers.

- The upgrading of distillers meal for use as human, animal, fish and pet food/feed.

- The tying in of some of these components with other community systems to save energy, (cogeneration) processing, and transportation costs.

The systems described above are working now and will continue to improve as we learn more about the wonders and potentials of nature. It is unlikely that all will work together on farms or even in one community. In most cases, a group of farmers and

their community will work together to produce an integrated system that will accommodate the natural, environmental, cultural and economic realities of their community.

So, we will bandage up our wounds, bury a few of our comrades, seek new volunteers, learn from our lessons, evaluate our opportunities and march on to the next objective, always keeping our minds on the characteristics of the final objective:

- Top soil and water protection.

- Reduced dependence on energy and chemicals imported into the farming community.

- Reduced dependence on foreign oil.

- High grade liquid fuels that can successfully compete with gasoline and diesel.

- Strengthened family farms in greater numbers.

- Revitalized rural communities.

As we engage the battle ahead, we can count on powerful allies—the wonders of nature, the creativity of the American people, and trees, trees, trees—for they—when properly managed—will not only provide us with food, feed and energy, but will also protect the top soil from the winds and erosion.

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