

1 **VIRGINIA TOBACCO INDEMNIFICATION**
2 **AND COMMUNITY REVITALIZATION COMMISSION**

3 701 East Franklin Street, Suite 501
4 Richmond, Virginia 23219
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9 **Research and Development Committee Meeting**

10 Thursday, May 22, 2014

11 9:00 A.M.
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13 Golden Leaf Commons Community Facility
14 Emporia, Virginia
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1 **APPEARANCES:**

2 The Honorable Kathy J. Byron, Chairman

3 Ms. Cindy M. Thomas, Vice Chairman

4 The Honorable Charles W. Carrico, Sr.

5 The Honorable Benton Chafin

6 Mr. Burgess “Butch” H. Hamlett, III

7 The Honorable Maurice Jones, Secretary

8 Department of Commerce & Trade

9 The Honorable Daniel W. Marshall, III

10 Ms. Sandra F. Moss

11 Ms. Connie G. Nyholm

12 Dr. Todd Pillion

13 Mr. Kenneth O. Reynolds

14 The Honorable Frank M. Ruff, Jr.

15 The Honorable Ralph K. Smith

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1 **APPEARANCES (cont'd):**

2 COMMISSION STAFF:

3 Mr. Timothy S. Pfohl – Interim Executive Director, Grants
4 Program Administration Director

5 Ms. Sarah K. Capps – Grants Program Administrator,
6 Southside Virginia

7 Ms. Sara G. Williams – Grants Program Administrator,
8 Southwest Virginia

9 Ms. Carolyn Bringman – Performance Data Analyst

10 Ms. Stephanie S. Kim – Director of Finance

11 Ms. Stacey Richardson – Executive Assistant

12 Ms. Suzette Patterson – Grants Office Manager

13 Mr. Benjamin Dawson – Grants Assistant, Southside Virginia

14 Ms. Jessica Stamper – Grants Assistant, Southwest Virginia

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DELEGATE BYRON: Good morning everyone, I call the meeting of the Research and Development Committee to order. Tim, would you call the roll?

MR. PFOHL: Delegate Byron?

DELEGATE BYRON: Here.

MR. PFOHL: Senator Carrico?

SENATOR CARRICO: Here.

MR. PFOHL: Delegate Chafin?

DELEGATE CHAFIN: Here.

MR. PFOHL: Mr. Hamlett?

MR. HAMLETT: Here.

MR. PFOHL: Secretary Jones?

SECRETARY JONES: Here.

MR. PFOHL: Delegate Marshall?

DELEGATE MARSHALL: Here.

MR. PFOHL: Ms. Moss?

MS. MOSS: Here.

MR. PFOHL: Ms. Nyholm?

MS. NYHOLM: Here.

MR. PFOHL: Dr. Todd Pillion?

DR. PILLION: Here.

MR. PFOHL: Mr. Reynolds?

1 MR. REYNOLDS: Here.

2 MR. PFOHL: Senator Ruff?

3 SENATOR RUFF: Here.

4 MR. PFOHL: Senator Smith?

5 SENATOR SMITH: Here.

6 MR. PFOHL: Ms. Thomas?

7 MR. THOMAS: Here.

8 MR. PFOHL: You have a quorum,

9 Madam Chairman.

10 DELEGATE BYRON: On the agenda, we
11 have the approval of our minutes from our meeting on May
12 7th, 2014. Do I have a motion?

13 DELEGATE MARSHALL: So moved.

14 DELEGATE BYRON: I've got a motion
15 and a second. All those in favor of approving the minutes say
16 aye. (Ayes.) All right. The only thing we have on our agenda
17 and those of you that were at the meeting if you recall an
18 application we were reviewing from Washington County and
19 the Commission members wanted time to review that and
20 wanted to hear from some folks from Washington County in
21 regard to some questions we had in relation to employment. I
22 understand we have some people here from Washington
23 County that want to come forward. So please give us your
24 name and tell us why your application would be good for
25 everyone.

1 MR. SAUNDERS: Thank you, Madam
2 Chairman, and Committee members. My name is Henry
3 Saunders. I'm Chairman of the IDA in Washington County.
4 The County is very supportive of this proposal in front of you.
5 Bristol Compressors has been a great partner in our county
6 and they have an opportunity to grow and expand in our
7 region and we are very excited about that. We also appreciate
8 the opportunity to come before you today and answer
9 questions. Mr. Munpower and Mr. Hunley are here to answer
10 your questions and they're very appreciative of the
11 opportunity to appear before you so thank you.

12 MR. MUNPOWER: Good morning and I
13 also want to thank the Committee to allow us a few minutes to
14 explain the grant proposal and what Bristol Compressors is
15 asking of the Committee. I'm Kevin Munpower and I'm vice
16 president of project engineering and Bristol Compressors.
17 With me is Rick Hunley. He is the director of human
18 resources. What we've done today is look at the questions
19 that came out of the previous meeting and we also looked at
20 the scoring and I've also put together a couple of slides here to
21 help answer key questions and then we'll answer any
22 questions the Committee has.

23 The next slide really speaks to why we
24 have to do this project. Our marketplace has drastically
25 changed in the air conditioning marketplace. Recently, the

1 European Union has now passed legislation that's going to
2 limit the refrigerant gasses that can be used in their market.
3 There's a timeline that says current gases that have to be
4 down to a 750 GWP. That's a global number. Let's go back to
5 the original slide. When you look at all the refrigerants that
6 we currently use today and that's the big blue bar there, well
7 above the new legislative requirements. Typically what
8 happens is that the European Union is first to legislate new
9 changes and the North American governments get involved
10 and they legislate changes. These changes will occur over the
11 next five to ten years and there's actually a timeline associated
12 with this change out. When you look at the requirement of
13 750 GWP and it says the only refrigerants left available to use
14 in the air conditioning marketplace will be your flammable
15 refrigerants. That consists of what's called R-32 and that puts
16 us just below the 750 and then there's a number of other
17 proprietary new refrigerants that are also flammable in nature.
18 The reason we have to do all this is because the marketplace
19 is going to require it. Every customer of ours on the global
20 market uses refrigerants that are above that requirement.
21 When you back up the timeline, it means that Bristol
22 Compressors will have to develop and test our compressor
23 platform to be approved for use with these new flammable
24 refrigerants and that's the reason for this project.

25 Next slide, please. Someone might thing

1 percent of the funds will be investment funds by Bristol
2 Compressor that will be invested into this program. The
3 \$808,000 fifty percent of the funding to support that
4 investment so as Bristol Compressor invests and spends from
5 the Tobacco Commission and reimburses those funds as we
6 proceed down the path. We have a timeline and we have real
7 quotes and we know exactly what we have to do in this facility
8 in order to upgrade our equipment in order to test these
9 refrigerants. The numbers there is what we would be seeing
10 down the path to execute this project.

11 Next slide, please. This is just another
12 breakdown of the funding requests and the specific use of
13 these funds. Some of the funds will be used and dedicated to
14 upgrading the facility, the building that would house the
15 equipment to do the testing. It has to be certified to test
16 flammable refrigerants and have a safe test environment to do
17 that properly.

18 DELEGATE BYRON: Can you turn that
19 so we can see it better?

20 MR. MUNPOWER: At the top here is the
21 source of funds fifty percent Bristol and fifty percent the
22 Commission and the use of the funds is shown below that
23 table, close to 400,000 is anticipated for a laboratory building,
24 the chiller, the cooling water system and you have to have a
25 safe facility to do this testing and then the lab test equipment

1 itself. Then at the bottom portion of this engineering and
2 technical services and electrical and mechanical, that's the
3 way the funds lay out as far as the use of the funds.

4 Next slide, please. To kind of summarize
5 this from our perspective, it does have market growth
6 potential. Bristol Compressors employs people in Washington
7 County and we have around 600 employees and families that
8 we're supporting and we do this because we have to grow our
9 business and this will position us in the market to grow the
10 employee base and sustain the current employee base. This
11 project has two prongs to it, protecting the current market and
12 the current market position, the current employee base and
13 putting us in a position to grow the business and allow us to
14 grow the employee base. All of our customers today use
15 refrigerants that are not meeting the new requirements. Every
16 customer globally will have to go through this transition, that's
17 pretty key. When you look at the timeline of the legislation,
18 this goes out pretty far. What happens is that the customer
19 base has to back up to get their systems designed and get our
20 compressor design. Our timeline turns into a very aggressive
21 timeline to have the product ready for our customer base.
22 This supports an aggressive approach to protect the current
23 employees and significant avenues for growth.

24 DELEGATE BYRON: Let me interrupt
25 you. I want to mention this is Secretary Jones, I think this is

1 probably your first R&D meeting.

2 SECRETARY JONES: Yes.

3 DELEGATE BYRON: And we want to
4 welcome you.

5 MR. MUNPOWER: The last couple of
6 points, what this project encourages is not just to position
7 ourselves for the market growth, it goes to show we're going to
8 be an environmental steward and a leader in the market and
9 we're not going to play defense. We're going to be a
10 progressive company that goes out with a new product that
11 will show that we have environmentally friendly products and
12 we're meeting the challenges of the next century with a
13 sustainable position in the market. We want our customers to
14 view us as a sustainable business with the product base on
15 board.

16 Those are the real things but the
17 downside is not leading by example and if your product base
18 falls, we don't want to be in that position. We want to be
19 viewed as a leader and we're going to be viewed as a leader.
20 This project is really bigger than you think on the surface. It's
21 a very important project for us for our whole portfolio of
22 products we supply to the market.

23 The last thing I'll say is if you watch the
24 news, the U.S. market has gone through a change this year.
25 The U.S. market has gone through a change this year and R-

1 410A product is going from a 13 efficiency level requirement to
2 14C. January 1 of this year our customers cannot ship
3 product that doesn't meet the 14C but to meet the market for
4 the first time in our history we're now facing R22 refrigerants
5 and going from there globally friendly refrigerant. There's
6 dramatic market dynamics at play here. In addition to that,
7 pressures from the European Union and others around the
8 chlorinated gases and eliminating those going forward. That's
9 really the presentation I had for you. Thank you.

10 DELEGATE BYRON: Now, we've been
11 through the staff originally and you also were with Mr. Giles
12 and the partnership team to review your application. Why did
13 it get all the way back to us and still have a vague number of
14 jobs, which is a big part of the requirement that we have in
15 our application for sustaining jobs and commercialization.
16 Why was that missing from the application through the whole
17 process?

18 MR. MUNPOWER: I wouldn't say there
19 was any intent for that directly. I think when you look at a
20 business like Bristol Compressors, you know we're in the
21 business to manufacture so we're not grant writers and people
22 that put these type of things together or this information
23 together. We were relying on others around us to guide us
24 properly on what we should provide. I think there was some
25 oversight there on certain key pieces of information you were

1 looking for. Obviously, this is a learning process for us to
2 make sure we have all the information we need. This wasn't
3 done on purpose. This is part of the process of us
4 understanding how to do this properly.

5 MR. PFOHL: I wanted to raise an issue
6 that I think we can resolve pretty easily. When staff first
7 reviewed the proposal and presented it at the vetting process
8 we had noted in the staff report that the Commission funds
9 used for equipment purchases. Which is about three-quarters
10 or more from the Commission could be owned by the IDA and
11 leased to Bristol Compressors under the terms of what's
12 mutually agreeable between the IDA and the Commission and
13 the company. That would be consistent with Commission
14 policy and when asked about the purchase with grant funds,
15 that would be consistent with Commission policy when assets
16 are purchased with grant funds for the benefit of a project and
17 company or beneficiary. I guess my question is is that a
18 solution that would be agreeable to the Washington County
19 IDA as the grantee and Bristol Compressors, equipment
20 purchased with Commission funds be owned by the IDA but
21 leased on reasonable terms to the company?

22 MR. MUNPOWER: The answer to that is
23 absolutely yes and we've had those discussions with
24 Washington County IDA at the very beginning of this process
25 and they informed us that was a requirement and we said no

1 problem with that and we would agree with that agreement to
2 satisfy those requirements. So from our perspective, that's a
3 non-issue.

4 MR. SAUNDERS: The IDA is certainly in
5 a position to do that and we understand that's part of the
6 package.

7 MR. PFOHL: Thank you.

8 DELEGATE BYRON: Any questions from
9 any of the members?

10 MR. HAMLETT: It seems like there's a
11 big balance on technology. Can you speak for a moment
12 about the likelihood in the end how this technology works and
13 the employees is increased by this level?

14 MR. MUNPOWER: We are currently
15 actively looking at this and we have actually physical
16 mechanisms in our facility for the baseline testing today.
17 Our early testing shows that this has significant promise and
18 addresses several of the technical issues that the reciprocating
19 compressor has. Basically how it starts, the efficiency level,
20 how it keeps the capacity level pretty flat through the
21 operating ranges. What this full compressor really does it
22 combines the best of the rotary and the best of the scroll
23 mechanisms, very small and compact which takes material
24 content out. We're very highly positive about this mechanism.
25 It's well over seventy percent confidence factor turns into a

1 very viable product and a product for the commercial arena, a
2 large compressor, which we don't currently have. That would
3 be used for large tonnage applications, five ton sizes for
4 commercial roof-top units. We've shown the mechanism and
5 our test results in the last couple of months and they agree
6 that this has significant advantages, too, and so far it looks
7 very promising.

8 MR. HAMLETT: Your competitors, if you
9 have the exclusive window to develop this technology, what
10 will your competitors be doing in the meantime?

11 MR. MUNPOWER: Like any competitor,
12 the market can evaporate and just you take somebody like
13 Emerson, they would be doing changes trying to make the
14 compressor much smaller and compact and efficient. They're
15 looking at material changes and speed changes and the speed
16 is quite a push right now. Then there's also the power supply
17 that's always considered, which is also being developed by
18 Bristol. So we have to compete like any business. They, our
19 competitors will make changes to their compressors. Scroll
20 right now is a very good compressor and operates only in
21 certain specific conditions, customers understand that and
22 the sound is also loud but this compressor will eliminate that.
23 We're dealing with technology scroll that's been out there for
24 almost twenty years and that's pretty much the lifeblood of the
25 product when the IT runs out. The window is open for new

1 market technology and trying to gain market share over scrolls
2 and it looks promising for us to do that.

3 DELEGATE MARSHALL: The GWP, is
4 that a worldwide standard or European standard?

5 MR. MUNPOWER: The GWP number
6 that's actually based on a calculation dealing with the amount
7 of carbon dioxide you put in the atmosphere. GWP is a
8 technical term. The legislative bodies around the world are
9 right now doing scientific studies that the higher the GWP
10 number the more effect there is on the environment. They've
11 run some numbers based on the number of systems installed
12 in the market and leak rates from systems and come to
13 agreement on what the GWP number should be to get the
14 overall global warming number down into a safe zone. There's
15 been a lot of studies and a lot of data behind that GWP
16 number and that's been developed over several years. All this
17 research just didn't start overnight.

18 The problem is that the really low GWP
19 numbers almost every single refrigerant has some
20 flammability level. The market would like to use propane,
21 probably the best refrigerant available like the R22, which we
22 all use. The problem is propane is highly flammable. The R22
23 propane will be considered and will be used in certain specific
24 applications. The EPA and others have put out very strict
25 guidelines on the amount of charge you can put in the system

1 if you want to use propane. But we'll have to go to low GWP
2 refrigerants because of the international environmental push.
3 Which one we end up with and which application is going to
4 be the real question. It will probably come down to how does
5 the refrigerant perform, what's the efficiency level, how much
6 capacity can it really deliver and what's the effect of that
7 refrigerant in a compressor system and all that has to be part
8 of the development process. A lot of those questions will be
9 answered through the next two years when we develop
10 product.

11 DELEGATE MARSHALL: You mentioned
12 earlier in your presentation that the GWP number is 750 and
13 that's in Europe. Is most of the technology you will develop
14 for the European market and then will the U.S. follow that up
15 and what percent of your products go overseas?

16 MR. MUNPOWER: Fifty percent of our
17 product is shipped internationally. Fifty percent is domestic
18 U.S. Europe is probably a fifth of that. We ship a lot of
19 product to northern Europe for heating systems to customers
20 like BB. What happened with the R22 change out and Europe
21 was first to adopt the Montreal protocol under these
22 refrigerants so that four star 22 phased out and what happens
23 is North American governments followed and we expect the
24 exact same thing will happen here but it could be based on
25 the Department of Energy getting feedback from folks like us

1 as we develop these products let's say are you in a position
2 now to release an R32 and are you in a position to do that.
3 Does the technology or is it now at a point where we can
4 change the requirements. So there still is a lot of discussion
5 that would have to occur between customers, Department of
6 Energy and EPA in order to see how feasible each one of these
7 are before DOE will make a recommendation to Congress and
8 talk about legislation and changes. So it will happen, but it's
9 anybody's guess when. But there's a lot of pressure now that
10 the EU has approved legislation.

11 DELEGATE CHAFIN: Madam Chairman?

12 DELEGATE BYRON: Delegate Chafin.

13 DELEGATE CHAFIN: Can you give us an
14 idea what your employment high numbers have been during
15 better economic times?

16 MR. MUNPOWER: I can take you back to
17 the early '90s. Bristol Compressor had well over three
18 thousand employees and we had about forty percent of the
19 market share in the global market. We had a brand new
20 product that the customers loved. We went into a joint
21 venture for producing scroll technology so we had the scroll
22 compressor that we developed. We were shipping both
23 reciprocating and scroll technologies. Fast forward to the year
24 2005, we were owned by York International and Johnson
25 Controls came in and purchased York. When that transaction

1 occurred, Johnson Controls decision was to sell the
2 compressor division off individually. Both the scroll
3 technology facility in Arkansas and the Bristol Compressor
4 facility in Virginia ended up as two independent entities.
5 When that happened, we obviously lost the scroll technology
6 platform that was sold to another entity. We only had a fifty
7 percent joint venture partnership in scroll technology so we
8 were not the controlling partner. Carrier was. We lost a large
9 portion of our portfolio and took our volume down quite a bit
10 when that happened. Then three to four years after that, the
11 housing market went south, which cut the total housing
12 volume in half. Here we were producing four million
13 compressors a year and scroll left and we went down to two
14 and a half. The market changed in residential and we were
15 down to 1.2 million and it's pretty clear how that happened.

16 Here we are today residential housing
17 has started to recover and we're trying to position ourselves
18 back because of refrigerant changes and efficiency changes
19 and we're trying to get our business back to those levels. The
20 only thing keeping Bristol Compressors from doing that is
21 product. We have the customers, our relationships are great,
22 we have the facility and we've got a great reputation of
23 reliability. To develop these projects are very important for
24 our growth and that's the only thing we lack, the right
25 products to get our customers for new applications. It's hard

1 to imagine there are applications out there. One application
2 and one big customer can represent 200,000 annual pieces,
3 one application. It's all there for us to get but it's being the
4 first one there with the right technology to tell our customers
5 Bristol is ready to go. And that's what we're trying to do.

6 DELEGATE BYRON: Who's leading your
7 technology division as far as the research of your products?

8 MR. MUNPOWER: I am the vice
9 president of product development. We had a series of
10 technicians and engineers at our facility to do all this research
11 at the Bristol site and that's where all our manufacturing
12 research is done.

13 MS. THOMAS: We talked a lot about jobs
14 and it sounds like you have a good plan here and track record.
15 When we talk about R&D, we're looking at how many new
16 jobs will be created. Maybe I missed it in your presentation
17 can you clarify that say a year from now or two years from
18 now or five years from now; what would be the impact of this
19 as far as jobs?

20 MR. MUNPOWER: The difficulty in
21 answering that question, a lot of that is based on market
22 dynamics and a lot of that is based on our customers.
23 Assuming we have the right product and assuming that the
24 customers accept the product, each of customers domestically
25 we would be well over 500,000 pieces and if you look at each

1 one of those application and how many units they need and if
2 we develop our produce we can gain easily the 300,000 pieces
3 of new business on our customer base. That employment
4 number is very conservative but it's very real. Now, the
5 timeline is the question. That depends on how soon we get
6 through the development and how soon our customers require
7 product. So I would think it will probably take a good two
8 years to get through what we need to do. It will take our
9 customers another good two years to get through what they
10 need to do before you start to see volume start to increase.
11 Some customers are more aggressive than others so at the
12 earliest you're probably talking about two and a half to three
13 years in volume but realistically you're probably talking about
14 four or five years before you start to see things move. I put
15 2018 on that slide, probably a conservative estimate and when
16 you start to see volume increase.

17 SENATOR CARRICO: Mr. Munpower,
18 you said 600 people no about 600 employees now are
19 developing the new technology and retaining those 600 is
20 going to be an issue?

21 MR. MUNPOWER: That's absolutely
22 critical. The downside is if you don't do this development
23 project and you don't deliver a product, every employee at
24 Bristol is at risk because every product we have now won't
25 meet the requirements. We've already seen enough

1 degradation of the volume especially in the housing market. If
2 we don't do anything here, that's a large risk you put on the
3 current employee base. We have to develop product in this
4 market in order to sustain our current employment. This is a
5 huge defensive move as well as an offensive growth move, it's
6 really both.

7 SENATOR CARRICO: So what this
8 Committee would be looking at is investing in your technology
9 to retain jobs with the future expansion once the technology is
10 out in the marketplace that you have applications for it?

11 MR. MUNPOWER: Correct.

12 DELEGATE BYRON: As far as your
13 market share now, are you able to sustain yourself through
14 the time it's going to take to get the new product to market?

15 MR. MUNPOWER: Financially, Bristol is
16 not in a very good position. For the first time we broke even in
17 2012 and we had new ownership and made money for '13 and
18 at a good profit level. So far this year, we're sustaining
19 another profit level. We've turned the business around the
20 corner so we're now profitable. Our customers come in and
21 review our financials now regularly to make sure we're
22 sustainable and they're comfortable we've done the right
23 things and we're moving forward. To answer your question,
24 we feel good about the sustainability of the current business.
25 It looks like we're out of the downturn in the residential

1 market. Things in the U.S. and things overseas are picking
2 up. There's changes with the new efficiency levels and
3 changes in the market. So everything is really looking positive
4 whereas two or three years ago it was not positive or as good a
5 picture.

6 SENATOR SMITH: Madam Chairman?

7 DELEGATE BYRON: Senator Smith?

8 SENATOR SMITH: You refer to the GWP,
9 I take it that is a gauge or measurement?

10 MR. MUNPOWER: It's actually a
11 number, Global Warming Potential number and assigned to
12 refrigerants specifically having to do with its chemical makeup
13 and how it relates to the amount of carbon dioxide or the
14 equivalent carbon dioxide that's put into the atmosphere.
15 That number is a relative number and at the sense of where
16 that refrigerant is at the global warming, radiation.

17 SENATOR SMITH: Then you refer here to
18 standards. Can you tell us what the European Standard is?

19 MR. MUNPOWER: The new legislation
20 which just now was passed has established a split system air
21 conditioning unit, maximum of 750 GWPs number. What that
22 means is that in the future based on the timeline values
23 they've established, you have to be below that 750 number in
24 the future if you have a product that you're going to ship into
25 the marketplace.

1 SENATOR SMITH: Is that a different
2 standard than in the U.S.?

3 MR. MUNPOWER: The U.S. standard is
4 yet to be established. The Department of Energy and EPA and
5 U.S. Congress now has to decide what they're going to do.
6 They typically follow the European Union and first to make
7 changes that affects the environment issues and then the
8 U.S./North American governments follow and the Asian Rim
9 countries follow that. There's a lot of discussion inside the EU
10 on every single one of these. Those refrigerants listed are
11 specifically assigned as test refrigerants through the American
12 Heating and Refrigeration Institute. Those were not selected
13 by chance. That includes DuPont, Honeywell refrigerants
14 that's been through the data testing and analysis and what
15 the GWP is and what the effects of those are. Those are over
16 the top as very viable alternatives for all the manufacturers to
17 consider. So we, among others, now are looking at these and
18 deciding which ones to test first, what the schedule looks like
19 to do a development plan for each one of these.

20 SENATOR SMITH: I'm aware that
21 refrigerant requirements and standards have changed over the
22 last forty years dramatically and it's changed from what it was
23 many years ago to what we use a few years later and I think
24 it's changed again. If there is not a U.S. standard, how do you
25 measure or how do we measure it in the U.S. today?

1 MR. MUNPOWER: You would say U.S.
2 standard, there's not an approved legislative requirement that
3 forces the standard to be on the books at all of the building
4 certified agencies. But that will come and there will be a
5 requirement just like there was when we got away from R22,
6 no more chlorinated refrigerants would be allowed in the U.S.
7 marketplace. So that four star 22 would be changed out to a
8 hydrochloric carbon. They didn't look at the GWP back then
9 but now there's more scientific data and now that global
10 warming is in play and now it changes the discussion from
11 that there's a very high GWP number. We now change that
12 refrigerant to something more environmentally friendly. The
13 U.S. government has some work to do to define what that level
14 is but chances are they'll follow the EU and I think that 750
15 number is probably pretty solid. R32 happens to be a very
16 good air conditioning refrigerant. It's a portion of R410A.
17 That's a lot of technology feasibility and where that 750
18 number came from really was technically feasible in the
19 market, both environmentally safe and able to maintain
20 efficiency levels. There's no standard yet but it's coming and
21 it's coming in the U.S. and Europe is leading this, leading the
22 charge.

23 SENATOR SMITH: 750 is the standard in
24 Europe?

25 MR. MUNPOWER: For split system air

1 conditioning units. They look at every application,
2 refrigeration station area, mobile refrigeration trucks, air
3 conditioning systems put in homes, every one of those
4 categories has a different rate, different volume and impact on
5 the market. They look at each of those to set a standard
6 depending on the application. The standard I showed you
7 happened to be the product application we serve, which is air
8 conditioning systems.

9 SENATOR SMITH: The split system you
10 refer to that is the home type?

11 MR. MUNPOWER: Where you have a
12 condenser outside and evaporator on the inside so it's a split
13 system.

14 SENATOR SMITH: The units you ship to
15 Europe passes that standard?

16 MR. MUNPOWER: No, the refrigerants
17 we ship to Europe does not meet the GWP number. We ship
18 R47C, the R22 product, we ship the 410A. The 410A is pretty
19 much the standard now for air conditioning. It doesn't have
20 chlorine but it's got a high GWP. So they don't always meet
21 the 750 number and those have a lifetime number now so
22 those products have a limited lifetime now.

23 SENATOR SMITH: Are you still able to
24 ship although it doesn't meet standards?

25 MR. MUNPOWER: They have a timeline

1 to do the change now.

2 SENATOR SMITH: It's not today?

3 MR. MUNPOWER: No, it's not today.

4 They're now changing legislation and now be required to have
5 a new refrigerant system for air conditioning on the market
6 and there's a timeline. Then they establish the GWP number.

7 It gives the system manufacturers time to develop product
8 and meet that new requirement.

9 SENATOR SMITH: You referred to
10 patents running out and had different standards in twenty
11 years. Did they have something that met the new standards
12 back then in Europe?

13 MR. MUNPOWER: Back in the '90s GWP
14 was not even on the discussion table and it wasn't understood
15 so there weren't standards around the global warming
16 number. It all centered around chlorinated refrigerants.
17 When you talk about patents, it's difficult to get a patent
18 centered around a specific type of general use chemical unless
19 you get a patent on your product and how to use that
20 particular refrigerant. Particularly patents are centered
21 around design issues and products and run out over a time
22 period, not necessarily related to refrigerants.

23 SENATOR SMITH: These refrigerants
24 that competitors are using today are they patents or you
25 simply pick them up and copy them?

1 MR. MUNPOWER: The propriety
2 refrigerant like the DuPont and their IT prevents their
3 competitors from making those refrigerants. R32 is not a
4 patented refrigerant. There's a lot of volume on the market
5 and has been for a number of years on R32. To answer your
6 question, some are and some are not.

7 DELEGATE BYRON: One more question.

8 SENATOR SMITH: Thank you, Madam
9 Chairman.

10 DELEGATE BYRON: How many years
11 have you been providing jobs at Bristol?

12 MR. MUNPOWER: Bristol Compressor
13 has been located there since the early '70s. We moved there,
14 there was a company called Sun Strand Compressors to
15 establish the business there in Washington County.

16 DELEGATE BYRON: But you've been
17 there a long time?

18 MR. MUNPOWER: Been there well over
19 forty years.

20 SENATOR CARRICO: Madam Chairman,
21 I'd like to make a motion that and I think we've heard
22 extensive testimony and we're not scientists, all of us aren't
23 scientists sitting here on this Committee and I think Mr.
24 Munpower has gone through a lot of discussion about what
25 the science of this is and what they do for over forty years and

1 they've been a long-established company and they've done a
2 lot of work in Washington County and in the area. The bottom
3 line is that fifty percent of their market base is European and
4 they have to meet that goal in order to stay in business and
5 including the 600 jobs they have in Southwest Virginia. I
6 make a motion to approve the \$800,000 plus that they're
7 asking for.

8 DELEGATE BYRON: We have a motion
9 and a second to approve request #2832 in the matter of
10 \$808,744 and it has been properly seconded. Any further
11 discussion?

12 SENATOR SMITH: Madam Chair?

13 DELEGATE BYRON: Senator Smith?

14 SENATOR SMITH: We debated this at a
15 recent meeting somewhere between ten and twenty thousand
16 dollars for each proposal that is vetted and supposedly we
17 have experts sitting on the panel who have spent a lot of time
18 evaluating these. Either they're not qualified or we know more
19 than they do and I'm not questioning that. Unfortunately for
20 Bristol Compressors they gave them a lower rating than any of
21 the other applications that's been approved like the five or six
22 that were vetted in this round. Are we going to continue to
23 use them when the experts tell us one thing and then we do
24 something else. Are we going to continue to do that? One way
25 or the other something's askew here.

1 SENATOR CARRICO: Madam Chairman?

2 DELEGATE BYRON: Senator Carrico.

3 SENATOR CARRICO: Madam Chair, I
4 would refer back to Mr. Munpower's testimony this is the first
5 time they've applied for these grants. They may not be an
6 expert in submitting applications and there might have been
7 information that they didn't provide that they should have
8 provided that they were unaware of at the time the vetting
9 process took place. I think they've stood before this
10 Committee and shown a lot of the things that was not done
11 through the vetting process that would have made their
12 number higher and that's what they're doing today and I
13 would reiterate my motion.

14 DELEGATE BYRON: I would say and we
15 have a full Commission meeting coming up to discuss the
16 process when we get done with this motion before us to talk
17 about this very issue briefly. It's frustrating at times for the
18 members and I want to remind everyone all that is a guide for
19 us and we certainly didn't put together a group to make our
20 decisions for us but it's to guide us through the process and
21 give us questions of insight and we still come back and
22 question the applicant if we feel that there's information that
23 we want to know about that warrants further review by the
24 Commission members. You are correct that we have given
25 them guidance and a way to evaluate and if they don't match

1 the way we feel, then we'll have that discussion. Right now we
2 have a motion before us, any other discussion? All in favor
3 say aye. (Ayes.) Any opposed? (No.) All right, we have two
4 nos but thank you very much.

5 Now, I think the Committee needs to go
6 back again and have a workshop and have a discussion
7 especially with new members that have come on and discuss
8 questions regarding the application process. This is a unique
9 Committee and looks at projects that aren't always cut and
10 dried. We have a lot of different scientific things that come
11 before us that we certainly are not experts in. We have
12 business requirements and business plans and job creation
13 and commercialization in the footprint. This particular
14 application we just had before us certainly shows stability in
15 the footprint being here for a long time. I think it brought a
16 different view than maybe some of the others that we've looked
17 at. The thing I discussed with Mr. Pfohl was the possibility of
18 maybe the staff coming back around and looking at the
19 paperwork from the original application way back before it
20 goes to vetting. That's where they brought out the no job card
21 and something from the original application. I think it would
22 serve us well and if they're in agreement with doing it and
23 having the staff after it comes from vetting give another brief
24 recommendation from the staff as well based on what VEDP
25 says and based on their familiarity with the staff members in

1 the Tobacco area. So that's something else we talked about
2 doing and I think everybody would be in agreement with that.
3 But I know we have some applications out there now.

4 Maybe we'll have another R&D meeting
5 that I talked about at a round table to go over some of the
6 concerns that we have. Any further discussion from anyone?

7 DELEGATE MARSHALL: Madam
8 Chairman, last year we had only two rounds of applications as
9 opposed to three.

10 DELEGATE BYRON: Yes, I think I made
11 a decision based on the discussion with Committee members
12 to flip around.

13 DELEGATE MARSHALL: Then this year
14 are we going to have three rounds or will we have another
15 round that will go out at the September meeting?

16 DELEGATE BYRON: At the last meeting
17 we had a discussion about skipping around.

18 MR. PFOHL: We'll meet in September
19 because we have the proposals entering the vetting process
20 now. At the May 7th Committee meeting we talked about
21 skipping an application cycle in the summer and potentially
22 resuming in the fall. Tentatively we identified October that
23 will allow the Committee to have the workshop conversation
24 that the Chair talked about as well as review the ones that are
25 in the vetting process right now.

1 DELEGATE MARSHALL: Madam Chair,
2 there's several members been on this Committee for quite
3 some time and have been to vetting. I would encourage if Mr.
4 Giles could let us know when the vetting will take place for the
5 projects to be sent forward so that new members will have an
6 opportunity to attend the vetting process. They don't let us
7 talk and we have to sit in the corner but we get to listen to the
8 whole process and I think it was very helpful to me and I'd
9 encourage you to do so if you can.

10 SENATOR CARRICO: To talk about the
11 vetting process, I think we've seen from this last couple here, I
12 know the experts do the vetting and we hear testimony that
13 everyone's not an expert in the application process and to get
14 back to Senator Smith's question when he said they were
15 rated the lowest in the scoring process, you heard him talk
16 and say that it's the first time and I think that's why. Does
17 the Committee have to hear from them after the vetting takes
18 place? I recall when we were in Roanoke and actually the
19 sports car company research was actually the lowest yet we
20 approved it. I think it was Senator Smith and Delegate
21 Marshall who knew a lot about this industry and asked a lot of
22 questions and we ended up approving that and they were the
23 lowest score. I think we as a Committee have to make that
24 decision even after the vetting is done. The reason we asked
25 them to be here today this company when they weren't in

1 Roanoke, I think we have an obligation to listen and to ask
2 questions and clarify and figure it out after those applications
3 are submitted because they're not experts.

4 DELEGATE BYRON: As the Chair
5 reminded Southwest yesterday, it doesn't hurt and certainly
6 very, very helpful and we're all busy but the applicants need
7 to try to meet with the members of the Committee, that saves
8 a lot of time and helps give some insight in some of the
9 applications. Those people out there might want to keep that
10 in mind in the future, especially when you're asking for large
11 sums of money and it's helpful to spend the extra time tyo
12 meet together. We are adjourned.

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PROCEEDINGS CONCLUDED.

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CERTIFICATE OF THE COURT REPORTER

I, Medford W. Howard, Registered Professional Reporter and Notary Public for the State of Virginia at large, do hereby certify that I was the court reporter who took down and transcribed the proceedings of the **Virginia Tobacco Indemnification and Community Revitalization Commission Research and Development Committee meeting when held on Thursday, May 22, 2014 at 9:00 a.m. at the Golden Leaf Commons Community Facility in Emporia, Virginia.**

I further certify this is a true and accurate transcript, to the best of my ability to hear and understand the proceedings.

Given under my hand this 30th day of May, 2014.

Medford W. Howard
Registered Professional Reporter
Notary Public for the State of Virginia at Large

My Commission Expires: October 31, 2014.

Notary Registration Number: 224566