

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 Tuesday, January 10, 2012

11 9:30 o'clock a.m.

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15 Omni Richmond Hotel
16 Richmond, Virginia

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1 APPEARANCES:

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3 The Honorable Kathy J. Byron, Chairman

4 The Honorable Daniel W. Marshall, III, Vice Chairman

5 The Honorable James S. Cheng

6 Secretary of Commerce and Trade

7 Ms. Mary Rae Carter, Deputy Director

8 Department of Commerce and Trade

9 Mr. Burgess "Butch" H. Hamlet, III

10 Ms. Sandra F. Moss

11 Ms. Connie Greene Nyholm

12 The Honorable Edward Owens

13 The Honorable Phillip P. Puckett

14 Mr. Kenneth O. Reynolds

15 The Honorable Frank M. Ruff

16 Ms. Cindy M. Thomas

17 The Honorable William C. Wampler, Jr.

18

19 COMMISSION STAFF:

20 Mr. Neal Noyes, Executive Director

21 Mr. Ned Stephenson, Deputy Executive Director

22 Mr. Timothy S. Pfohl, Grants Program Administration Director

23 Ms. Stephanie S. Kim, Budget Director

24 Ms. Sara G. Williams, Grants Coordinator - Southwest, Virginia

25 Ms. Sarah K. Capps, Grants Coordinator - Southside, Virginia

1 January 10, 2012

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3

DELEGATE BYRON: Good morning, everyone. I'll call
4 the meeting of the Research and Development Committee to
5 order.

6

Neal, would you call the roll.

7

MR. NOYES: Delegate Byron.

8

DELEGATE BYRON: Here.

9

MR. NOYES: Secretary Cheng.

10

SECRETARY CHENG: Here.

11

MR. NOYES: Mr. Hamlet.

12

MR HAMLET: Here.

13

MR. NOYES: Delegate Marshall.

14

DELEGATE MARSHALL: Here.

15

MR. NOYES: Ms. Moss.

16

MS. MOSS: Here.

17

MR. NOYES: Ms. Nyholm.

18

MS. NYHOLM: Here.

19

MR. NOYES: Mr. Owens.

20

MR. OWENS: Here.

21

MR. NOYES: Senator Puckett.

22

SENATOR PUCKETT: Here.

23

MR. NOYES: Mr. Reynolds

24

MR. REYNOLDS: Here.

25

MR. NOYES: Senator Ruff.

1 SENATOR RUFF: Here.

2 MR. NOYES: Ms. Thomas.

3 MS. THOMAS: Here.

4 MR. NOYES: Senator Wampler.

5 SENATOR WAMPLER: Here.

6 MR. NOYES: All present.

7 DELEGATE BYRON: Our minutes are on the website,
8 and I've looked at them. Do we have a motion to approve them?
9 All right, it's been moved and seconded that the minutes be
10 approved. All those in favor, say aye. (Ayes). Opposed? (No
11 response).

12 Next up is Jerry Giles.

13 MR. GILES: Good morning to you all, we've got some
14 minor technical difficulties. Ladies and gentlemen, it's my
15 pleasure to kind of present findings of Round 6 of the Tobacco
16 Commission R & D Grants Review Panel process.

17 As I intended to do in the other presentation, start out
18 with the slide you see in front of you that lists the ten elements,
19 five in the science phase, five in the business phase, that the
20 Review Panel team leaders and their subject experts from the
21 various organizations are as to four and also comment on as we
22 go through a full review process. I'm not going to take the time
23 unless you desire that I do it, to go through each of these ten
24 elements.

25 I would point out that you see a new element at the

1 very bottom which is in blue ink in a different font, if you will.
2 This is based on follow-up discussions that I had with Neal and
3 Ned after your most recent R & D Committee Meeting held on
4 December 14th. I was not in attendance at the meeting, but I
5 received a message that it was a consensus view of the R & D
6 Committee that you wished to have the Review Panel add a new
7 component for scoring which relates to business plan quality and
8 the defense of the position as codified in the business plan.
9 We're happy to accommodate that request, and the review
10 sessions going forward will incorporate that.

11 I would point out that if you look at the ten elements,
12 those elements should really be the core or the sum total of what
13 shows up in the full business plan ultimately. If we see a
14 tremendous divergence in scoring between the standard ten
15 elements and the business plan elements, I will be shocked, to
16 be quite candid with you.

17 In Round 6, the R & D Committee asked us to review
18 three applications, and you see those listed on the top of this
19 particular slide, and we did that. In the second listed item,
20 Number 2436, the AAERC Clean Coal application, and those
21 chose to withdraw from the process on December the 9th, which
22 was basically two days or one day before the face-to-face
23 defense by the applicant team.

24 What you see below are the scores, they're not in any
25 particular order. Those on the Committee will have seen the

1 individual score cards and individual commentaries for each of
2 those two applications, so you'll be able to align those scores
3 with which one of the two applications it applies to.

4 In Round 6, we heretofore have always had one of the
5 Tobacco funding R & D energy centers represented, but because
6 of an unavoidable could not change conflict, Dr. Ray Fowlkes with
7 the Southwest Education Center did not participate in this
8 particular scoring round. You don't see here that particular
9 organization listed in the slide here.

10 With respect to some of the comments, we'll take the
11 liberty, if you allow, of commenting from the individual scores
12 comment sheets that apply to two applications we actually
13 submitted in today's recap.

14 So I'll start with Application 2429. This application
15 came in through the IALR, a request for \$1,438,628, and this
16 was to support applied research and development of biomaterials
17 and therapeutic proteins in plants, in this case, varieties of
18 potatoes.

19 There were two firms involved, Global Cell Solutions,
20 based in Charlottesville, Virginia, and J.R. Simplot Company of
21 Boise, Idaho. And they have committed to provide an
22 established foundation technology, including a worldwide global
23 license agreement, for a two-phase initiative to be accomplished
24 in collaboration with the IALR. The grant request needed
25 supports both phases, and all the equipment purchased using

1 Tobacco Commission monies would be owned by the IALR.

2 Phase I is expected to take approximately one year,
3 and involves using genetic encoding techniques to increase
4 protein density within the tuber, and optimization of protein
5 collection and purification, and development of processes to grow
6 potato cells in bioreactors.

7 Phase II, also provided for within the existing budget,
8 and would leverage the previous work to produce proteins for use
9 in veterinary and human medicine.

10 On the science side, the observations were that
11 ProteiosBio and its partners, Global Cell Solutions and the J.R.
12 Simplot Company, and if you're not familiar with that company,
13 that's one of the largest privately held firms in the country with
14 annual sales of about \$4.5 billion. They have developed the
15 ability to genetically modify potato plant genes and intends to
16 use this technology to generate a variety of commercial proteins,
17 starting with interleukin IL-2 and extending to a wide array of
18 medical/therapeutic proteins.

19 J. R. Simplot has successfully demonstrated the ability
20 to modify potato genes so that the potatoes form chlorogenic
21 acid, anthocyanins, and flavonolos.

22 Majority view is that the team has demonstrated the
23 critical scientific proof of concept; however, they have not
24 demonstrated or proven any process yields which are
25 foundational to scalability and market competitive pricing power.

1 It is also felt that the alignment with the IALR team,
2 which has solid, credible experience and infrastructure in plant
3 propagation applied science is a strong point, benefiting all
4 parties involved.

5 Technical milestones presented by the applicant team
6 were viewed as very solid and included both detail and linkage to
7 timing, budget, and proposed research.

8 On the commercialization side for this particular
9 application, we felt that resting on a strong Intellectual Property
10 portfolio and the hands-on involvement, both scientific talent and
11 dollars invested, of the J. R. Simplot Company is of immense
12 value to the success of the commercial program, if process yields
13 prove out.

14 Skill sets and credentials of the management team are
15 very solid, and it is obvious, based on letters of support, that
16 stakeholders in this science and commercialization space have a
17 strong interest in the outcomes of these efforts.

18 As noted earlier in the Science commentary, while the
19 proof of concept has been defended, process yields to make a
20 viable product at marketable costs are the largest unknowns at
21 present. Focus on IL-2 as the initial product is viewed as a good
22 business plan model.

23 With respect to Application 2437, AAERC UXB
24 Biopolymer. The Wise County IDA is requesting \$2,475,000 for
25 pilot-level scale up and demonstration of biopolymer soil

1 amendments and to validate performance and utility in the field.
2 Biopolymers offer a sustainable alternative to petrochemical oil-
3 based polymers and would have applications, such as soil
4 stabilization, nutrient retention, crop yield, and root mass
5 enhancement, dust and heavy metal abatement, and reduced
6 irrigation requirements. UXB's current scale production capacity
7 is insufficient for demonstrations to industrial partners who desire
8 to see 50-to-100-acre test sites, thousands or gallons are needed
9 for even medium-scale field trials, and it is necessary to confirm
10 the ability to produce biopolymers economically at larger scale.

11 Highlights of the Review Panel's comments on the
12 Science presentation. The applicant has successfully generated
13 engineering samples of its product at the bench scale. It has
14 defined several fields of use for its technology and is in the
15 process of either performing demonstrations, or negotiating to do
16 so, for all its major markets, including military,
17 mining/construction, and agriculture, in the applications of dust
18 abatement and agricultural soil amendment. It has not
19 demonstrated proof of concept in all target markets and across
20 all applications, but it was the majority view of the Panel that this
21 lack of total coverage of all markets and applications would not
22 be a necessary condition to begin further commercialization of
23 the product.

24 Applicant team has demonstrated significant
25 improvements over the Army process for production, which is

1 important for both scalability and potential new intellectual
2 property generation going forward.

3 While milestones and requirements were listed in the
4 business plan, these were not as crisp as the Panel would have
5 liked in the areas of identification of clear technical requirements
6 that must be demonstrated to enter the pilot stage, or those that
7 must be demonstrated to exit the pilot stage and enter high-
8 volume manufacturing.

9 Comments related to the Commercialization phase.
10 The target markets which the applicant team is pursuing are
11 large, and the applicant's target margins appear robust. Key
12 challenges for the applicant team appear to be manufacturing
13 scale-up, cost, and market acceptance rather than market share.

14 UXB appears to be a well-regarded, well-managed
15 company. It is a global environmental technology and response
16 solutions company with core business in military munitions,
17 explosives, and reactive chemical support services. The
18 challenges and sales channels of their legacy business lines are
19 different from those related to manufacturing and selling
20 specialty materials to non-military targets.

21 Target markets/applications selected by the applicant
22 team involve substantial investment dollars to produce at
23 profitable scale. Further analysis of which markets are truly work
24 pursuing on a risk/reward basis is encouraged strongly.

25 So those are the scores and the comments that I'm

1 sure most of you have seen before and what you see before you.
2 Are there any questions I can try to answer?

3 DELEGATE BYRON: Thank you. Any questions of Mr.
4 Giles? Thank you very much. I'm sure you're not going
5 anywhere, if you don't mind, sir, if we have any questions. We
6 seem to have a delayed reaction.

7 MR. GILES: Just to recap. In the bottom line, we've
8 got two pretty solid outfits. I also have, and you may not want
9 to deal with it now, a couple of more slides, which I think the
10 Chair and Vice Chair have seen and from some comments that
11 came from the Review Panel leaders following Round 5, or if
12 you'd like to defer, that's fine, also.

13 DELEGATE BYRON: I think we'll vote on the
14 applications first, thank you.

15 Ned, I don't know if you were planning to go over the
16 applications first or if we want to vote on these separately before
17 we move on, what's the pleasure of the Panel?

18 MR. STEPHENSON: Madam Chairman, I was going to
19 give you some housekeeping items on what is before you. If I
20 could direct your attention to page 30 in your book. Your
21 decision points this morning are to rule on the five applications
22 that are shown with a gray block in the bottom right-hand
23 corner, in particular among the five gray blocks.

24 The first two are the applications that you tabled in
25 September and brought them back here today. You've seen the

1 scores before, but you just didn't make a decision.

2 The next two are the brand new applications that
3 Jerry has just provided the scores with this morning for the first
4 time.

5 The fifth one at the very bottom is an application that
6 was scored a year ago and you approved it a year ago, and it's
7 before you now for a second round of funding.

8 So you have five applications that are asking for your
9 attention this morning. You can take them up in any manner
10 that you choose. However, quickly, before I yield, page 31
11 shows the raw and weighted scores for each of these applications
12 before you today. Thank you, Madam Chairman.

13 SENATOR RUFF: Can you refresh our memories as to
14 why we tabled 2282 and 2220?

15 DELEGATE BYRON: I'm trying to remember that
16 myself. I believe we tabled one of those because the scores
17 were low and we were also discussing business plans at the time
18 and I'm not sure that we had business plans attached with them.

19 MR. NOYES: I recall two reasons: One, the business
20 plan issue, the business plans needed to be submitted; the
21 second issue that I recall was your instructions to the staff to
22 provide a score that was weighted 70 percent in favor of
23 commercialization potential and 30 percent on the scientific side.
24 And those were the two issues, as I recall it.

25 DELEGATE BYRON; We probably want to discuss this

1 after or maybe not when we see the scores, but you can see the
2 weighted scores don't vary much from your other scores except
3 until you get over the sixth mark, and then they go higher.
4 Under six, they don't vary a whole lot and maybe just by a
5 couple of points. So that's interesting. We're back to what Mr.
6 Giles was saying how we are evaluating the applications. Why
7 don't we go with 2497 and deal with the first three and separate
8 out the other two?

9 MR. NOYES: The two that Jerry spoke on.

10 MR. STEPHENSON: Two tabled applications and two
11 new applications.

12 MR. NOYES: The ones Mr. Giles just spoke about are
13 the ones that were reviewed during the, 2437 and 2429.

14 MR. STEPHENSON: Correct.

15 DELEGATE BYRON: 2320 and 2437.

16 MR. STEPHENSON: The two tabled applications were
17 2282 and 2320, tabled from the last time in September, and you
18 had the scores and for reasons stated, you elected to hold them
19 over until this meeting.

20 MR. NOYES: The two that the Committee has just
21 heard, 2437 and 2429.

22 DELEGATE MARSHALL: Madam Chair, I make a
23 motion we accept 2437 and 2429, both of those scored above
24 our threshold five, and I move we accept them.

25 SENATOR PUCKETT: Second.

1 DELEGATE BYRON: Any discussion on that motion?
2 Hearing none, 2437, Wise, clean energy, and 2429, IALR, we
3 have a motion to accept those applications, and a second. And
4 those are in the amount of \$2,475,000 and \$1,438,628.

5 MS. THOMAS: Can we vote on them separately?

6 SECRETARY CHENG: There was a comment on one of
7 them that, and I don't know whether it was we were going to go
8 back and ask them to work on some milestones. We asked Staff
9 to go back and look at those milestones.

10 MR. NOYES: We have not previously done that
11 before.

12 DELEGATE MARSHALL: Madam Chairman, Ms.
13 Thomas wants to vote on these individually.

14 DELEGATE BYRON: Who seconded the motion, do you
15 want to withdraw that motion? All right, let's go back and we'll
16 vote on them one at a time.

17 SECRETARY CHENG: 2437, the comments about the
18 milestones. There was a comment that they weren't crisp as the
19 Panel wanted them. Do we want a crisp up some of these
20 milestones? I think that's reasonable if we're going to give them
21 2.4 million. If you look at that page, this one here, and Jerry
22 was saying that.

23 DELEGATE BYRON: Let's move on to 2429, IALR. I
24 move we accept it.

25 SENATOR PUCKETT: Second.

1 DELEGATE BYRON: We've got a motion and a second.
2 Any more comments on 2429? All right, all in favor, say aye.
3 (Ayes). Opposed? (No response). That motion passes.

4 Now, 2437. I'm trying to think of how we would work
5 something like that, approving it, and then want them to or do a
6 better job on the business plan. Who's going to evaluate it?

7 SECRETARY CHENG: The Panel looked at it, and does
8 Jerry have any other observations or suggestions? Is there
9 anything the company can do better, and I'm not saying not to
10 vote on it, but there was something about milestone
11 requirements. Here it is, while milestones and requirements
12 were listed in the business plan, these were not as crisp as the
13 Panel would have liked in the areas of identification of clear
14 technical requirements that must be demonstrated to enter the
15 pilot stage, or those that must be demonstrated to exit the pilot
16 stage and enter high-volume manufacturing.

17 That's what I'm referring to, Madam Chairman.

18 MR. GILES: You can appreciate a delicate balance in
19 terms of trying to make specific comments, what did they really
20 mean with a group like this kind of faced with it since you
21 weren't there to hear the detailed presentation. I'll make two
22 comments, and hopefully they'll be helpful.

23 Throughout the discussions, the Review Panel has
24 been tightening the screws on milestones, tightening the screws
25 on approving and substantiating the economic impact in the

1 tobacco region. The bar has been raised consistently over time.
2 What you're seeing here is scores that would have been much
3 lower, around one, really been focusing on milestone definitions,
4 and that's one observation.

5 The second observation, I would not on behalf of the
6 Review Panel team leader, I would not want to suggest that this
7 comment is meant to be a show stopper, and I hope that's
8 helpful.

9 MS. THOMAS: My comment or question would be
10 more along the lines of commercialization panel comments. It
11 talks about two challenges. It talks about manufacturing scale-
12 up costs, et cetera. Then the other comment talking about
13 substantial investment dollars to produce at profitable scale.
14 Further analysis of which markets are truly worth pursuing on a
15 risk reward basis is encouraged strongly. I take that to mean
16 there's going to be a whole lot more capital investment involved
17 to get this to marketability.

18 MR. GILES: As a practical matter, a pretty job
19 intensive and an actual full-scale production scale-up, yes. With
20 respect to comments about focusing on which markets are
21 worthy of pursuing, I'll repeat myself, and that comment for the
22 benefit of the R & D Committee is not meant to be a show
23 stopper. You need to recall that these comments ultimately go
24 to the applicant team themselves. So the suggestion that you
25 may want to continue to sharpen the focus on which market you

1 really want to pursue given the capital requirements to stand up
2 before the full-scale production, and that's consulting, advising
3 them, suggesting to them. We think that's important for their
4 long-term success. It's not meant to be a derogatory comment
5 at all.

6 MR. NOYES: I think what this applicant is seeking
7 demonstrate at the pilot stage has many alternative applications
8 in a commercial setting. All I understood the recommendation to
9 say is that focus on one, two, or three rather than trying to
10 satisfy the needs of a broader variety.

11 In this particular instance, I received, I don't know if it
12 was communicated to members of the Committee, but I received
13 a letter from Dartmouth and the bench industry has a specific
14 interest in this particular technology. It may be going forward
15 this applicant will say I'm going to follow up first with that
16 particular market and then look to scale up to a commercial scale
17 on the applications that the military might have, but it could also
18 be in the agriculture industry, or it could be in road-building, and
19 all these different alternatives. I'm confident the Panel's
20 comment was not intended in a negative sense. I would think in
21 a positive sense. There's lots of ways this technology might be
22 used.

23 MR. GILES: I would agree with your comments.

24 DELEGATE BYRON: I would like to say that when you
25 look at the scores and the applications we had as far as the

1 science team and looked at the credentials of these people as a
2 team, then maybe they see some areas they need to work on as
3 far as milestones and mapping things that could be improved on.
4 I don't know if that helps any. I think the other scores are there.

5 MS. THOMAS: Based on what we have in this, it
6 appears that it's a worthy project for us to be involved in.
7 However, I think we need to know more about what they are
8 doing based on these comments, because it seems like a lot of
9 the things they're working on could be expanded on.

10 DELEGATE BYRON: That might be an outcome of
11 funding that they currently have as priorities. There seems to be
12 a lot of opportunities for the applicant.

13 MR. BURGESS: I'd like to ask Mr. Giles to comment
14 further on one comment you made. I understand that
15 throughout the process from the first batch to now, the focusing
16 more on milestones and trying to improve the process at 2.5
17 today is stronger than a 2.5 eighteen months ago.

18 MR. GILES: I think that's reasonable to say, yes. I
19 cannot quantify numerically that, but it's a reasonable statement.

20 DELEGATE BYRON: Do we have any further
21 comments on this application? Does anyone want to hear from
22 the applicant? The applicant is here, and we have that option to
23 hear from them if you wish. That's the Committee's prerogative.

24 DELEGATE MARSHALL: I move we accept 2437.

25 SENATOR PUCKETT: Second.

1 DELEGATE BYRON: Any further discussion on the
2 motion? All those in favor, say aye. All in favor of approving
3 2437 in the amount of \$2.4 million, say aye. (Ayes). Opposed?

4 MS. THOMAS: No.

5 DELEGATE BYRON: All right. Now, we have 2282,
6 2320, and 2497. Are we going to hear from staff on the
7 recommendations?

8 MR. NOYES: I'll be happy to do that. The Committee
9 received a note from me that describes the situation on these
10 projects and what Ned mentioned earlier. This is the second
11 phase of the project that was approved initially a year or so ago.

12 In reviewing the progress they've made to date, that's
13 all been sent to you, which is about 70 pages long. They're on
14 track. Everything they did in terms of or anticipated in Phase I is
15 fine. The score on the aggregated science and the
16 commercialization score and VEDP listed it at 5.26, which is
17 actually 5.46.

18 The weighted score is 5.38. You have an estimated
19 total score for this three-phase project. The Staff recommends a
20 Phase II award of \$4,462,000, three contingencies. All Phase I
21 funds need to be used ahead of draw on Phase II.

22 The AAERC needs to hold title to the equipment. The
23 situation where we have an applicant at the higher ed. center is
24 going to make improvements in putting equipment in, in a
25 different location in a facility owned by a different commission

1 grantee. I think the AAERC Research Center at Wise should hold
2 title to the capital assets.

3 Third, it is somewhat concerning to me, and I had this
4 discussion with Mr. Rodgers and other applicants, indirect costs
5 are allowed by this Committee, but the indirect costs need to be
6 projects related rather than constituting a bank account that can
7 be used later for a different project.

8 So what I'm seeking here for the third condition that
9 the indirect costs need to be documented. I'm not saying that
10 we shouldn't do it. There should be a way to approve funds that
11 they use for purposes other than Project 2497. Indirect funds
12 are fine, they need to be project-related. The Staff
13 recommendation is to award \$4,462,000 subject to those three
14 conditions. Those conditions should be stipulated.

15 MR. OWENS: I so move. I move those conditions as
16 stipulated.

17 SENATOR PUCKETT: Second.

18 MR. OWENS: I have a question for you.

19 DELEGATE BRYON: There's a motion and a second
20 based on stipulations outlined by Neal.

21 MR. OWENS: Having found in the past the third --
22 what was that?

23 MR. NOYES: We simply haven't tracked, I continue to
24 see it raised and the question is, is this project related that
25 you're considering recommending for approval? I'm not getting

1 an answer that tells me sure, and if I was, then going forward
2 we're going to have to document how indirect monies are used.
3 This is the first time.

4 DELEGATE BYRON: The Committee may recall we
5 started or we're going to start having Staff recommend grant
6 amount going forward like we do on our other committees.

7 Our next round will have not only what they
8 requested, but what the Staff recommendation is that they
9 actually received based on the information that they provide.
10 Any further discussion or questions on this or does anyone wish
11 to be heard? Does the applicant?

12 Hearing none, all in favor of the motion, say aye.
13 (Ayes). Opposed? (No response).

14 DELEGATE MARSHALL: Madam Chairman, I move we
15 approve Applications 2282 and 2320 in a block.

16 MR. OWENS: Second.

17 DELEGATE BYRON: Does anyone have any questions
18 or discussion? 2282 is the Dan River application. It was revised.
19 And then 2320, biofuel application. Questions or comments?

20 All those in favor, say aye. (Ayes). Opposed? (No
21 response).

22 That concludes our application work.

23 Now, Mr. Giles, do you want to come back up and
24 share that information that you had?

25 MR. GILES: Thank you, Madam Chair. Before I put

1 the first slide up, give a little quick background. During the face-
2 to-face verbal defenses are the application team in Round 5, we
3 had the pleasure of having Chair and Vice Chair and two other
4 members of the Committee present to sit in as full-scale
5 observers of that process. Following the actual presentation by
6 the applicant team, we've had enough time to spend up to 30
7 minutes before the members of this Committee and in talking
8 one-on-one directly with the Review Panel team leaders.

9 So what I put together, and actually I sent this out
10 several weeks or a month ago, but I thought it might be
11 worthwhile, time permitting, for the entire Committee to see
12 some of those cuts and observations and to share them with you.
13 I have much more copious details for each of the team leaders
14 and the Review Panel and trying to condense it down to
15 something with more bite size. I'll read these for the benefit of
16 those that can't see the slide. I'll go ahead and read these.

17 Initial R & D Fund application guidelines should focus
18 more heavily on economic outcomes in the Tobacco Region and
19 require clear delineation of number and wages of jobs to be
20 created over the first 36 months. And then I've got in quotation,
21 "more business plan like." These are comments coming from the
22 Review Panels to the leaders.

23 The second point. Need to make sure that the
24 Tobacco Commission and R & D grant is not a poison pill for a
25 company. Future and current investors can deal with almost

1 anything, by adjusting their terms and conditions of the
2 investment, except Number 1, substantial uncertainty; and, two,
3 terms and conditions of previous investors, parenthetically the
4 Tobacco Commission, that are senior to the terms of current or
5 later investors. That's what the poison pill means or analogy that
6 I just mentioned.

7 Virginia universities appear to be very hesitant to
8 participate following the insertion of perfected security interests
9 in IP and especially the punitive damages provisions. "Handcuffs
10 are acknowledged as necessary, but these are cutting blood flow
11 and stifling participation by universities and some companies."

12 The fourth point. "You could give consideration to
13 lower dollar awards for more applied science projects than
14 commercialization ramp-up."

15 Next page, next bullet. Since the Review Panel itself
16 is not engaged in post-grant milestone audits, it is hoped this is
17 being funded through some means, in order to ensure the
18 integrity of the desired outcomes, especially before follow on
19 grant applications come in from the same project teams.

20 In general, there should be a waiting period for those
21 who do not make it through the Review Panel process
22 successfully, at least six to 12 months, in order for them to
23 mature their efforts, and to be sure their idea is not purely
24 contingent upon Tobacco Commission support in order to be
25 viable.

1 With reference to the following Technology
2 Commercialization Roadmap, the Tobacco Commission R & D
3 fund, based on its goals, should have a "sweet spot" at Stages 3,
4 4, and 5. In reality, most of the grant applications are in Stage 2
5 or 3, and sometimes 4. Not certain this can be changed
6 materially.

7 This particular commercialization roadmap has two
8 authors. One is a Dr. Goldsmith, who has pretty substantial
9 national recognition for being able to analyze the
10 commercialization roadmap and what needs to happen at each
11 step. It's also the collaboration of CH2, which as you recall,
12 serves as one of the Review Panel team members of the overall
13 process. They do a pretty darn good job of describing the
14 progression or lifeline in terms of taking basically an idea, an
15 invention, and research and stepping it through milestones to
16 what has to happen to be successful in order for it to be ready to
17 go to the next stage.

18 To recap, your "sweet spot" based on goals you set
19 out originally in July of '09, that "sweet spot" is really wrapping
20 up the commercialization by the alignment of this chart to be in
21 Stages 3, 4, and 5. In reality, what we're seeing is primarily 2,
22 3, and 4, I'm not sure there's a material change there.

23 Then you go back to the concept of helping to fund
24 high-powered strong research at the right stage with the right
25 management team, and you need to, if you're inclined, help them

1 through the “valley of death”, and that’s really Stages 2 and 3 in
2 particular.

3 Madam Chair, I offer these comments and thoughts as
4 really kind of a recap from actually Session 5, and they’re
5 available to you.

6 DELEGATE BYRON; Thank you very much. That’s
7 very helpful. I want to make sure the Committee members get a
8 copy, and I’d like to digest something after I read all of that work
9 that you’ve put into that.

10 MR. NOYES: I’m very appreciative to you, Jerry.
11 When Jerry visited with Ned and I, we determined to discuss this
12 at some length. The next applications aren’t due until mid-
13 March, and a decision by this Committee on which to refer be
14 done in conjunction with our May meeting. And then the vetting
15 process will go forward, and there’ll be a late September decision
16 on those as far as applications from March.

17 There’s a little time window, six months, when I have
18 asked Jerry to pull together a vetting team and go more carefully
19 through, five or six points in this roadmap, come back to this
20 Committee with recommendations on how we might revise the
21 terms and conditions of the grant agreements. I don’t expect it’ll
22 come back and we’ll say we don’t care if commercialization
23 occurs in a footprint, and that’s not likely to happen.

24 Of course, if this was just about fisheries, we’d like to
25 be able to commercialize it and where they can get the best deal

1 and that might not be advancing the revitalization mission. The
2 Staff intends to work with Jerry and members of the vetting
3 group and see if we can't find the documents that govern the
4 agreements and see what it would take to maybe move things to
5 three, four, or five, and less emphasis on two. Jerry said he'd be
6 happy to work with us on that. We will obviously keep members
7 of the Committee advised.

8 SECRETARY CHENG: In looking at the vetting work,
9 we don't have a venture capitalist group. We have like CH2M
10 Hill. Do you think they give good enough information about what
11 your venture capitalists would be looking at, because there's
12 pretty hefty dollars here? Anyone that gets to this stage is going
13 to need funding in the future. I know they're going to be looking
14 for more funding perhaps through venture capitalists. Do we
15 have anybody on the Review Panel that would be a good
16 prospect for venture capital purposes?

17 MR. GILES: Those of you who were on the Committee
18 in July of '09, which was an initial presentation of what the
19 Commission wanted to do and what the Panel was looking at, like
20 15 or 16 issues, and hopefully would be adopted by the R & D
21 Committee, the full commission which they were. One of the
22 things I asked for was the capability to have them included in the
23 makeup of the Review Panel up to two venture capitalists. I
24 requested that, and here's the experience that I've had
25 attempting to fulfill that request.

1 There are venture capitalists, and then there are
2 venture capitalists. Unlike large research universities, venture
3 capitalists don't have the capability to go from soup to nuts in
4 terms of subject matter expertise the way that a university would
5 or large corporations, such as CH2M or a research institute, such
6 as SRI. So consequently, these, the focus in terms of spaces
7 where they have prior experience themselves individually or they
8 can hire talent that has a national reputation in the business
9 sector. So that's one of the limitations. If you're going to find a
10 VC representative, it would have to be a pretty good sized firm
11 that has a very broad portfolio purpose.

12 The biggest venture capitalist firm in the world is, and
13 I went to them, and I knew the former chief operating officer
14 personally, and I approached him and asked him if he'd be willing
15 to be one of the participants. He said, yes, but with the caveat,
16 he would not be involved in the meeting, and I understood that.
17 These folks are all at that level, these people are, have net worth
18 of hundreds of millions of dollars. The amount we recommended
19 and you approved to pay, \$250 an hour, that's not very much
20 when you're managing billion dollar portfolios.

21 I approached two other VC players I know personally
22 and dealt with and told them what you're trying to accomplish
23 here. I got turned down by both of them. Don't have the time,
24 we don't do all that much energy, for example, so we really don't
25 have anything.

1 So to answer your question, CH2M Hill, they have
2 billions of dollars in revenue. They are direct investors and
3 emerging companies. The same is true with SRI. They're
4 working with technology their teams develop, they invest in
5 companies. Other than the Review Panel themselves
6 representing institutions, not all of them, but a good number of
7 them are former entrepreneurs who have set up their own
8 company, such as yourself. I don't lose any sleep at night over
9 the fact that a VC player in the group. I was the one that
10 suggested that we do this in practical terms. I'm not sure the
11 Review Group needs to be any larger than what it is, but I hope
12 that responded to your question.

13 DELEGATE BYRON: Thank you, Jerry.

14 MR. NOYES: Jerry, Ned, and I met. There were a
15 couple of additional calls you indicated you would make.

16 MR. GILES: Certainly I can try, but I don't think you
17 want me to dilute the quality of the end project. I'd have a hard
18 time saying professionally this is going to be okay, but I'll be
19 happy to try.

20 MR. NOYES: He did make a concerted effort but got
21 turned down, as he said.

22 SECRETARY CHENG: For funding purposes and for the
23 future of some of these, I'm sure our teams do a good job.

24 DELEGATE BYRON: Thank you very much, Jerry. I'll
25 make sure the Committee gets copies of their presentation.

1 All right, moving along, our next application deadline
2 is March 15th, 2012. Our meeting will be before that period. I
3 know during the meeting some of the questions that came up,
4 some of the applicants might be useful to advise them that prior
5 to our Committee Meeting after the applicants have gone through
6 scoring, that if you had something available to the Committee
7 members to see visually, we'd like to know that. Something that
8 would answer questions they may have before going into the
9 meeting might be helpful. So that's just a word of advice. I
10 know the Panel gets to look at a lot of information, but anytime
11 we could see some of the comments that would come up during
12 the meeting might be helpful.

13 DELEGATE MARSHALL: I'd ask you to look at page
14 30. If you look down at the left-hand side, the application is
15 2022 and 2047, 2129, especially 2129, some of those we already
16 agreed to. My question is do we have a timeframe that we have
17 to accept, they have to accept the money by so many months or
18 years after we approve it? I know in the case of Halifax, I
19 understand they're not going to do it, but does money get put
20 back in the pot?

21 MR. NOYES: We do that, it's been done. We already
22 did that.

23 DELEGATE BYRON: The Committee needs to know,
24 remove it from the record and show it on there somewhere, that
25 the application --

1 MR. NOYES: -- We always do that.

2 DELEGATE BYRON: We should let the Committee
3 know that, we have some of the grant money back in the pot.
4 You're talking about all three?

5 DELEGATE MARSHALL: 2022 is still possible. 2047, I
6 think they told us that they, and it was something about the
7 footprint. 2129, I understand there are some problems with
8 that.

9 MR. NOYES: That's been formally withdrawn.

10 DELEGATE BYRON: Another question, the timeframe
11 for about spending the money.

12 MR. NOYES: They have a grant period as part of the
13 grant agreement. They're required to report at various intervals.

14 So at the end of three years, if there was a balance,
15 we have to either extend it or claw back the funds.

16 DELEGATE BYRON: We can assume that if it's inactive
17 for two years --

18 MR. NOYES: -- None of them are inactive.

19 MR. HAMLET: Madam Chairman, the
20 commercialization in the footprint, are all of these cases in the
21 footprint?

22 MR. NOYES: Those are the terms of the existing
23 agreement. That's for a period of three years after completion of
24 the grant period not to be commercialized outside of the
25 footprint.

1 MR. HAMLET: I was looking for the reason.

2 DELEGATE MARSHALL: Everyone is different, 2022,
3 the applicant based on the agreement, Greenville County. 2047,
4 the Research Institute not commercialized in the footprint. So,
5 then 2129, that was a company in Northern Virginia that sort of
6 fell apart.

7 DELEGATE BYRON: Well, any comments from the
8 public? Hearing none, do I have a motion to adjourn? All right,
9 we have a motion, we're 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 Tuesday, January 10th, 2012, at 9:30 o'clock a.m., at the Omni Richmond Hotel, Richmond, 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 25th day of January, 2012.

Medford W. Howard

Registered Professional Reporter

Notary Public for the State of Virginia at Large

MY COMMISSION EXPIRES: October 31, 2014.