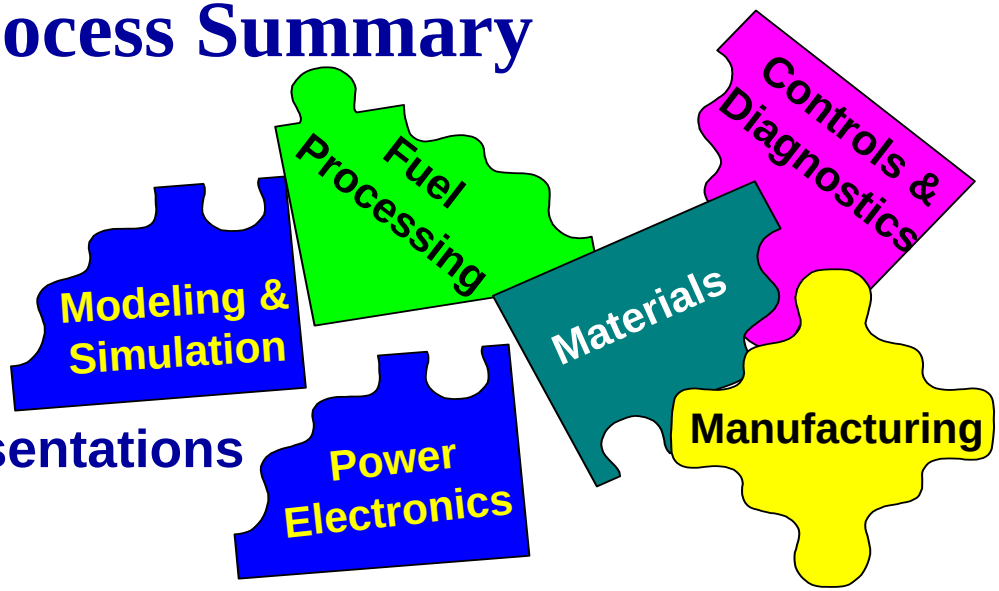
Solid State Energy Conversion Alliance Core Technology Program

May 12 – 13, 2004 Workshop

Peer Review Rating Results Summary

Donald Collins

Review Process Summary



- **Core Technology Project Presentations**
  - Project Objectives & Results
  - Non-proprietary Information
  - Industry, National Lab & University Participation
- **Verbal & Written Constructive Comments**
  - Written Comments on Peer Review Forms
  - Industry Verbal Feedback at Workshop
- **Core Participant Review & Reply to Comments**
  - Reply to Comment Issues
- **DOE NETL Redirect Projects as Needed**

Peer Review Questions

Science & Technology Issues

1. How relevant are the technical issues being addressed in this project?

Objectives & Approach

2.a. If the objectives are fully met, how significant will be the results of this project?

2.b. How effective is the approach in addressing the technical issues of this project?

Results

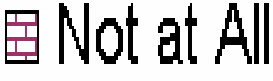
3.a. How well do the results/progress relate to the project objectives?

3.b. How important are the results of this work in the advancement of the Core Technology area?

Applicability

4. How beneficial are the results of this work in the development efforts of the Industry Teams?

Peer Review Rating Scale & Definitions



Not at all – is viewed to be inferior in quality and amount, possibly duplication of existing work

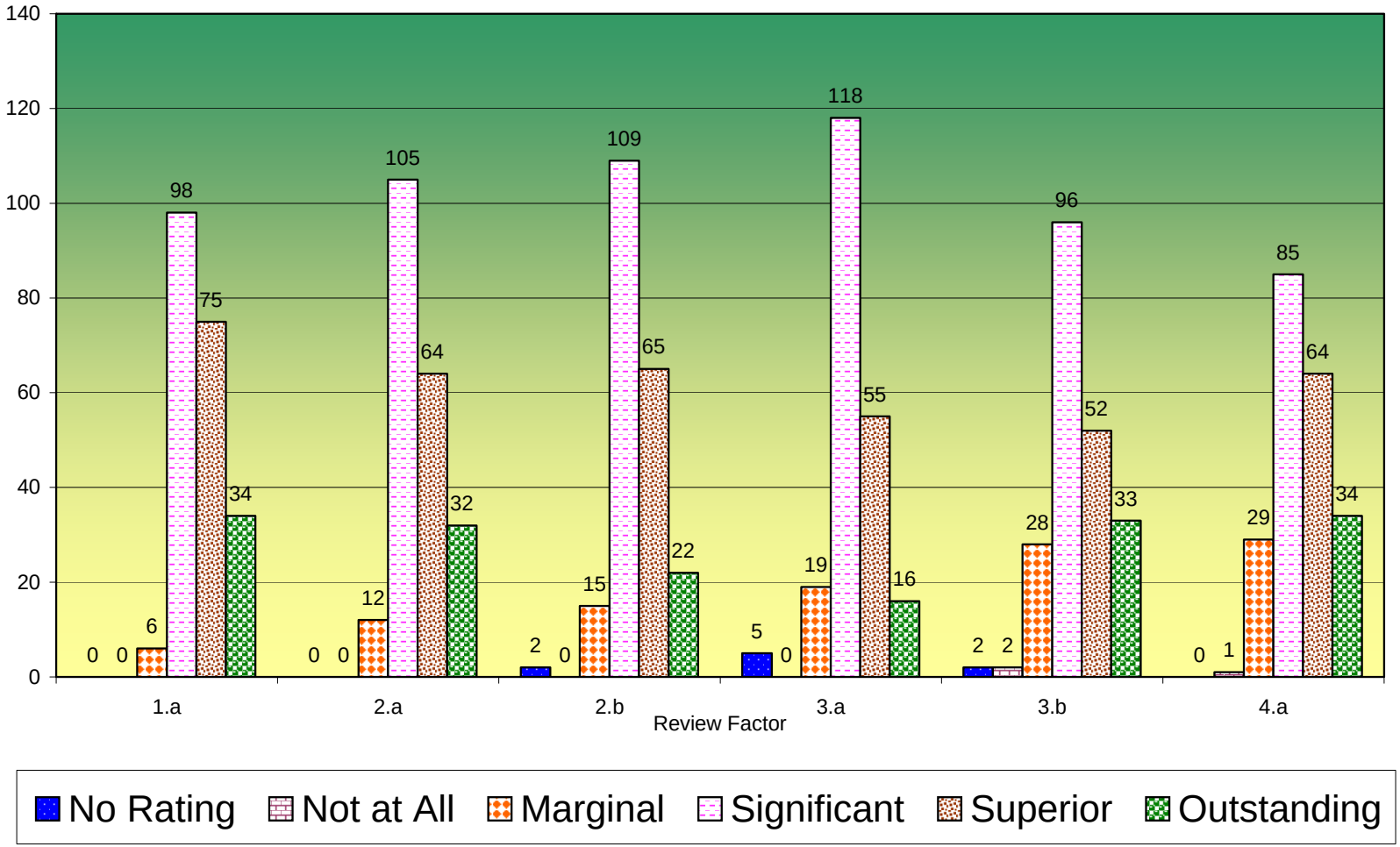
Marginal – provides/likely to provide little useful knowledge or technology advancement

Significant – has/will have an influential impact on the core science and technology

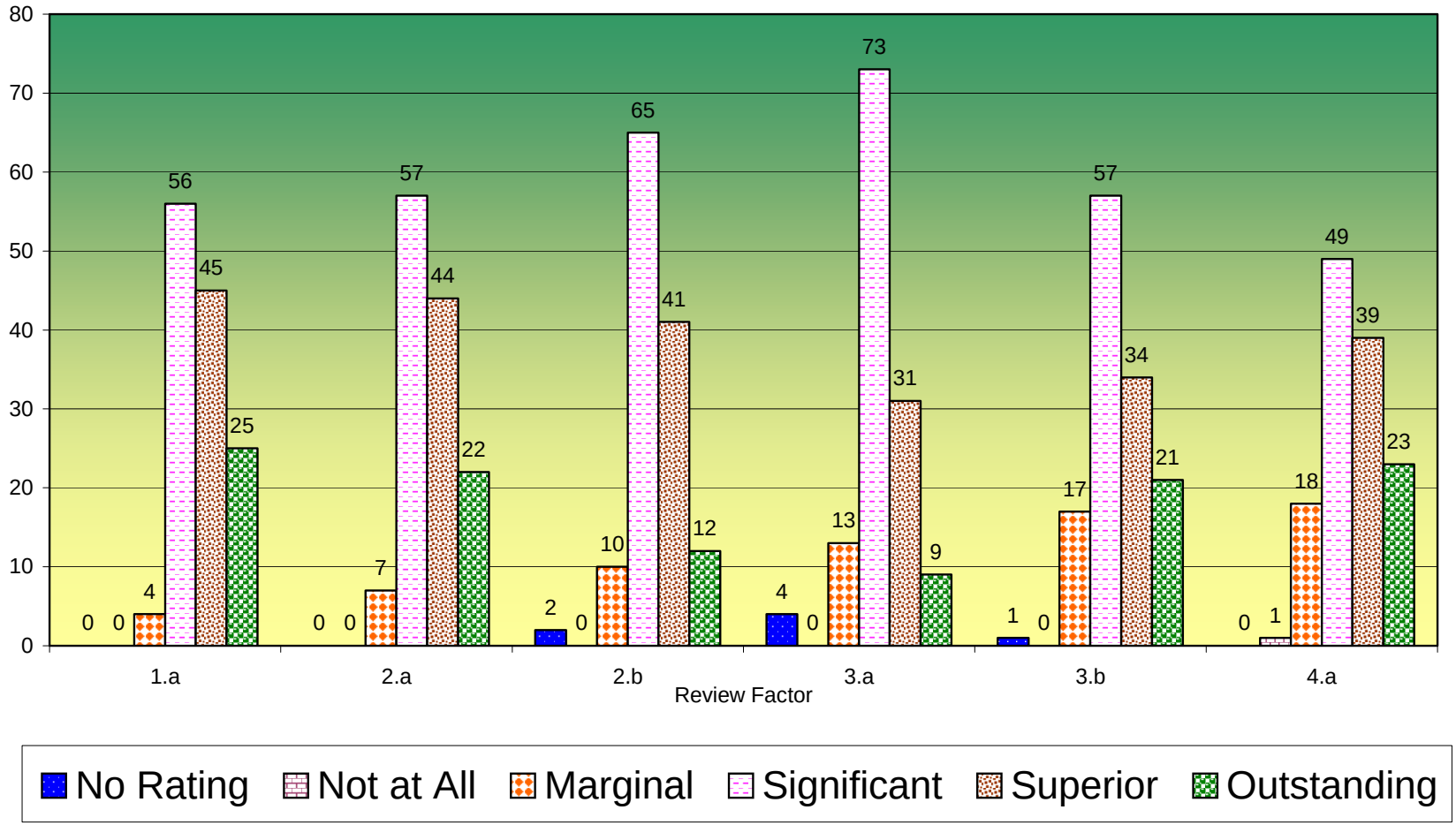
Superior – is considerable in quantity, quality of advancement of core science and technology

Outstanding – marked by eminence and distinction in advancing the state-of-the-art and/or knowledge in the fields of science and engineering

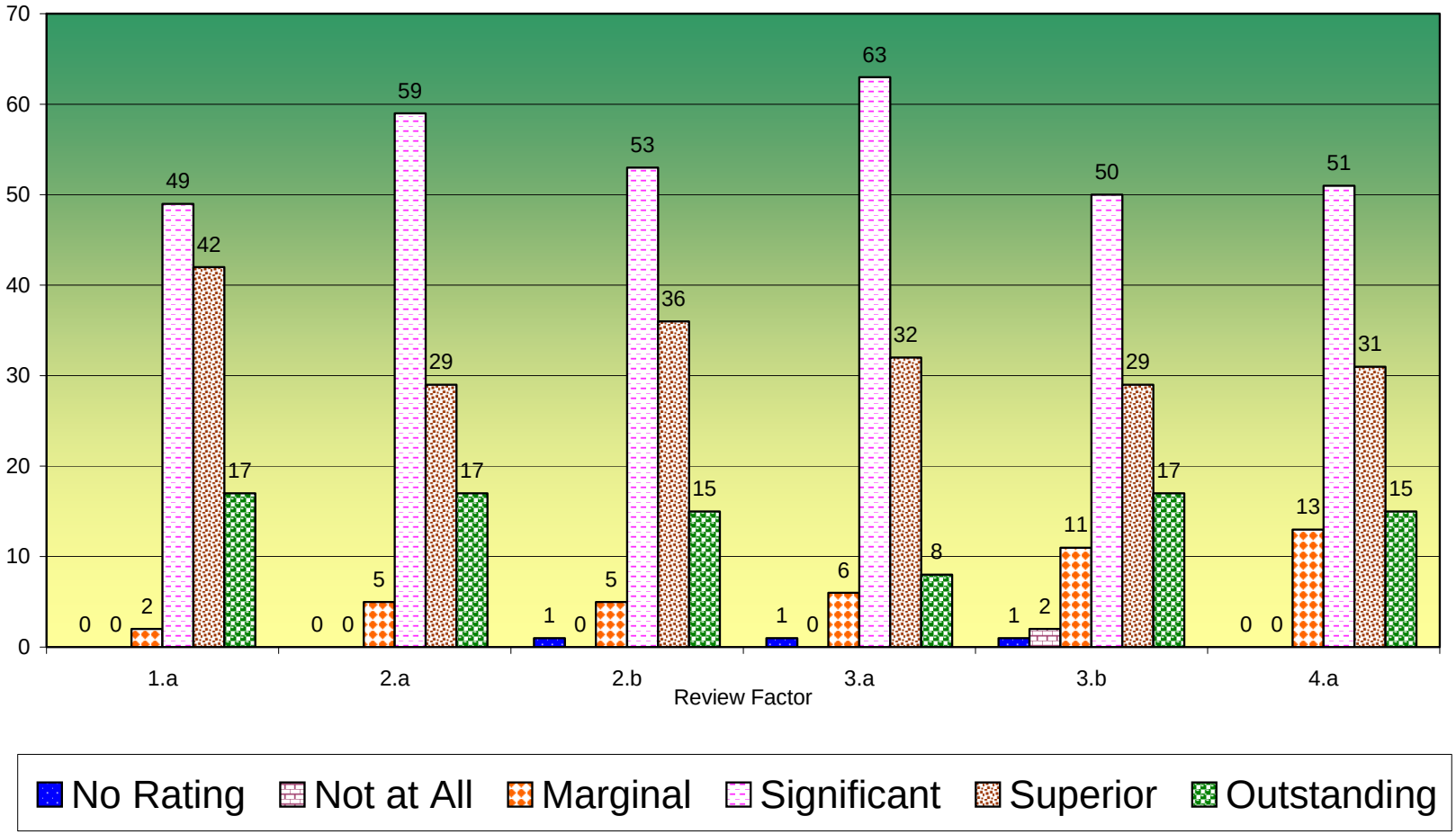
Overall Program Ratings



Overall Program
SECA Industry Team Ratings



Overall Program
Non-SECA Industry Team Ratings



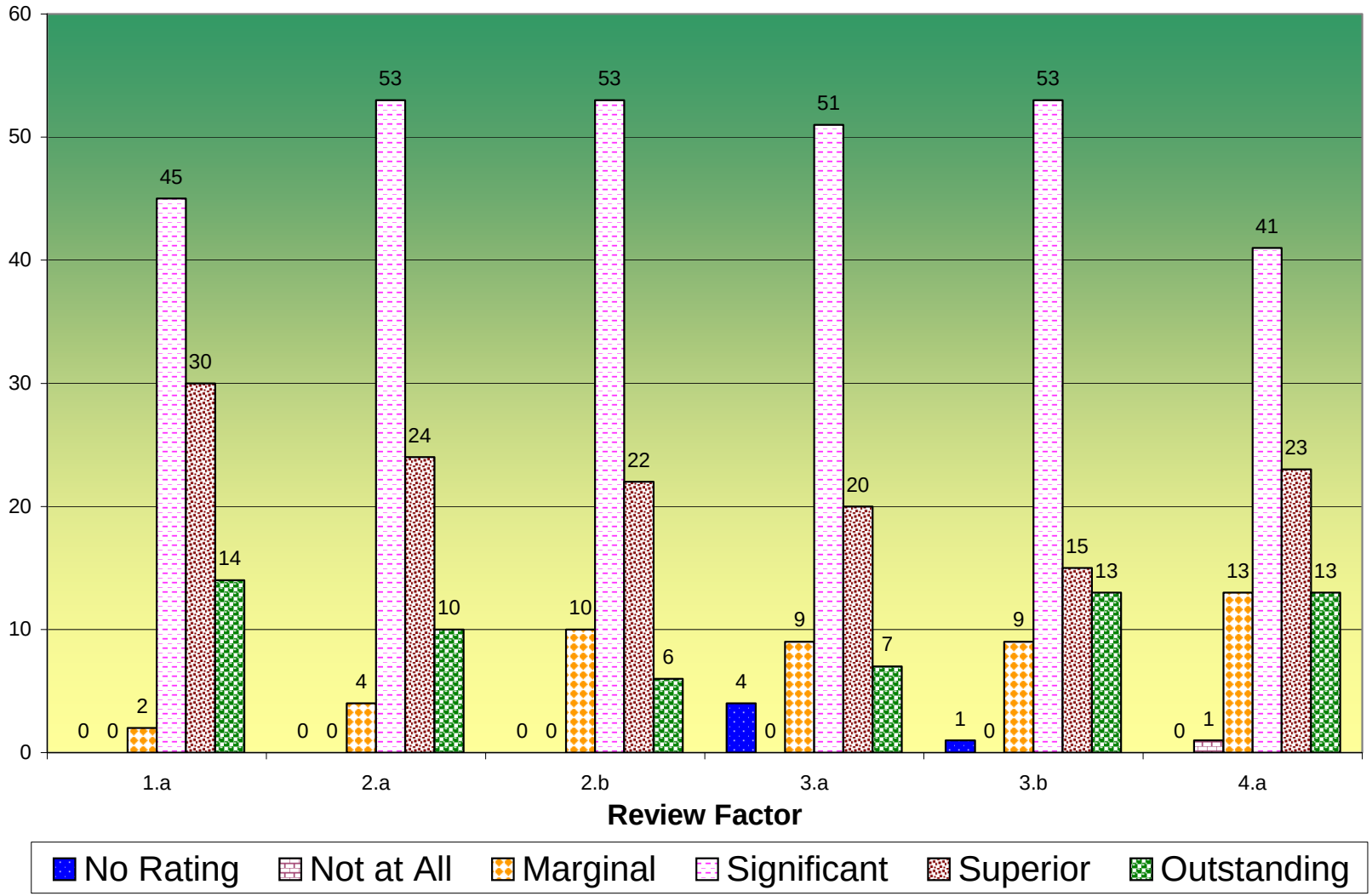
Overall Program Rating Data (1 of 2)

Reviewer Industry Team	No Rating	Not at All	Marginal	Significant	Superior	Outstanding
1.a	0	0	4	56	45	25
2.a	0	0	7	57	44	22
2.b	2	0	10	65	41	12
3.a	4	0	13	73	31	9
3.b	1	0	17	57	34	21
4.a	0	1	18	49	39	23
Sub-Total	7	1	69	357	234	112
National Laboratory	**No Rating**	**Not at All**	**Marginal**	**Significant**	**Superior**	**Outstanding**
1.a	0	0	1	28	12	0
2.a	0	0	4	33	4	0
2.b	0	0	4	33	4	0
3.a	0	0	5	27	9	0
3.b	0	1	10	25	5	0
4.a	0	0	7	25	9	0
Sub-Total	0	1	31	171	43	0
Government (non-DOE)						
1.a	0	0	0	8	14	10
2.a	0	0	0	13	7	12
2.b	1	0	0	7	13	11
3.a	1	0	0	13	10	8
3.b	1	0	0	9	12	10
4.a	0	0	1	13	10	8
Sub-Total	3	0	1	63	66	59

Overall Program Rating Data (2 of 2)

Reviewer Other	No Rating	Not at All	Marginal	Significant	Superior	Outstanding
1.a	0	0	1	13	16	7
2.a	0	0	1	13	18	5
2.b	0	0	1	13	19	4
3.a	0	0	1	23	13	0
3.b	0	1	1	16	12	7
4.a	0	0	5	13	12	7
Sub-Total	0	1	10	91	90	30
Factor Totals	**No Rating**	**Not at All**	**Marginal**	**Significant**	**Superior**	**Outstanding**
1.a	0	0	6	98	75	34
2.a	0	0	12	105	64	32
2.b	2	0	15	109	65	22
3.a	5	0	19	118	55	16
3.b	2	2	28	96	52	33
4.a	0	1	29	85	64	34
Rating Totals	9	3	109	611	375	171
Non-Industry Team Factor Totals	**No Rating**	**Not at All**	**Marginal**	**Significant**	**Superior**	**Outstanding**
1.a	0	0	2	49	42	17
2.a	0	0	5	59	29	17
2.b	1	0	5	53	36	15
3.a	1	0	6	63	32	8
3.b	1	2	11	50	29	17
4.a	0	0	13	51	31	15
Rating Totals	3	2	42	325	199	89

Materials & Manufacturing



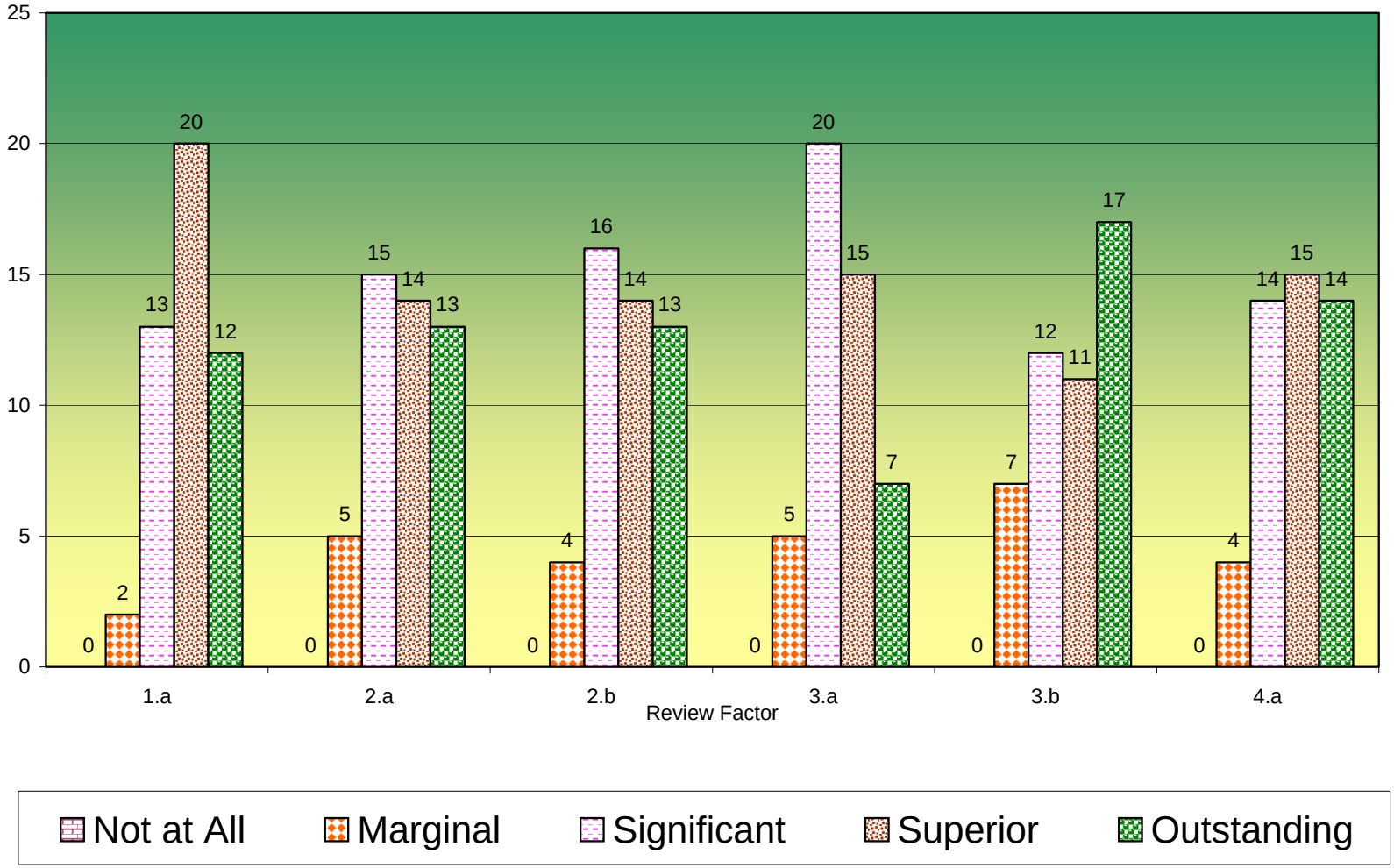
Materials & Manufacturing Rating Data (1 of 2)

Reviewer Industry Team	No Rating	Not at All	Marginal	Significant	Superior	Outstanding
1.a	0	0	2	31	23	14
2.a	0	0	4	34	22	10
2.b	0	0	8	35	21	6
3.a	4	0	8	35	16	7
3.b	1	0	7	36	13	13
4.a	0	1	10	30	16	13
Sub-Total	5	1	39	201	111	63
National Laboratory	**No Rating**	**Not at All**	**Marginal**	**Significant**	**Superior**	**Outstanding**
1.a	0	0	0	14	7	0
2.a	0	0	0	19	2	0
2.b	0	0	2	18	1	0
3.a	0	0	1	16	4	0
3.b	0	0	2	17	2	0
4.a	0	0	3	11	7	0
Sub-Total	0	0	8	95	23	0
Government (non-DOE)	**No Rating**	**Not at All**	**Marginal**	**Significant**	**Superior**	**Outstanding**
1.a	0	0	0	3	4	3
2.a	0	0	0	6	1	3
2.b	1	0	0	3	3	3
3.a	0	0	0	8	1	1
3.b	0	0	0	4	4	2
4.a	0	0	0	8	1	1
Sub-Total	1	0	0	32	14	13

Materials & Manufacturing Rating Data (2 of 2)

Reviewer Other	No Rating No Rating	Not at All Not at All	Marginal Marginal	Significant Significant	Superior Superior	Outstanding Outstanding
1.a	0	0	0	4	8	5
2.a	0	0	0	5	8	4
2.b	0	0	0	6	9	2
3.a	0	0	0	10	7	0
3.b	0	0	0	7	7	3
4.a	0	0	2	7	5	3
Sub-Total	0	0	2	39	44	17
Factor Totals	**No Rating**	**Not at All**	**Marginal**	**Significant**	**Superior**	**Outstanding**
1.a	0	0	2	45	30	14
2.a	0	0	4	53	24	10
2.b	0	0	10	53	22	6
3.a	4	0	9	51	20	7
3.b	1	0	9	53	15	13
4.a	0	1	13	41	23	13
Rating Totals	5	1	47	296	134	63
Non-Industry Team Factor Totals	**No Rating**	**Not at All**	**Marginal**	**Significant**	**Superior**	**Outstanding**
1.a	0	0	0	21	19	8
2.a	0	0	0	30	11	7
2.b	1	0	2	27	13	5
3.a	0	0	1	34	12	1
3.b	0	0	2	28	13	5
4.a	0	0	5	26	13	4
Rating Totals	1	0	10	166	81	30

Fuel Processing



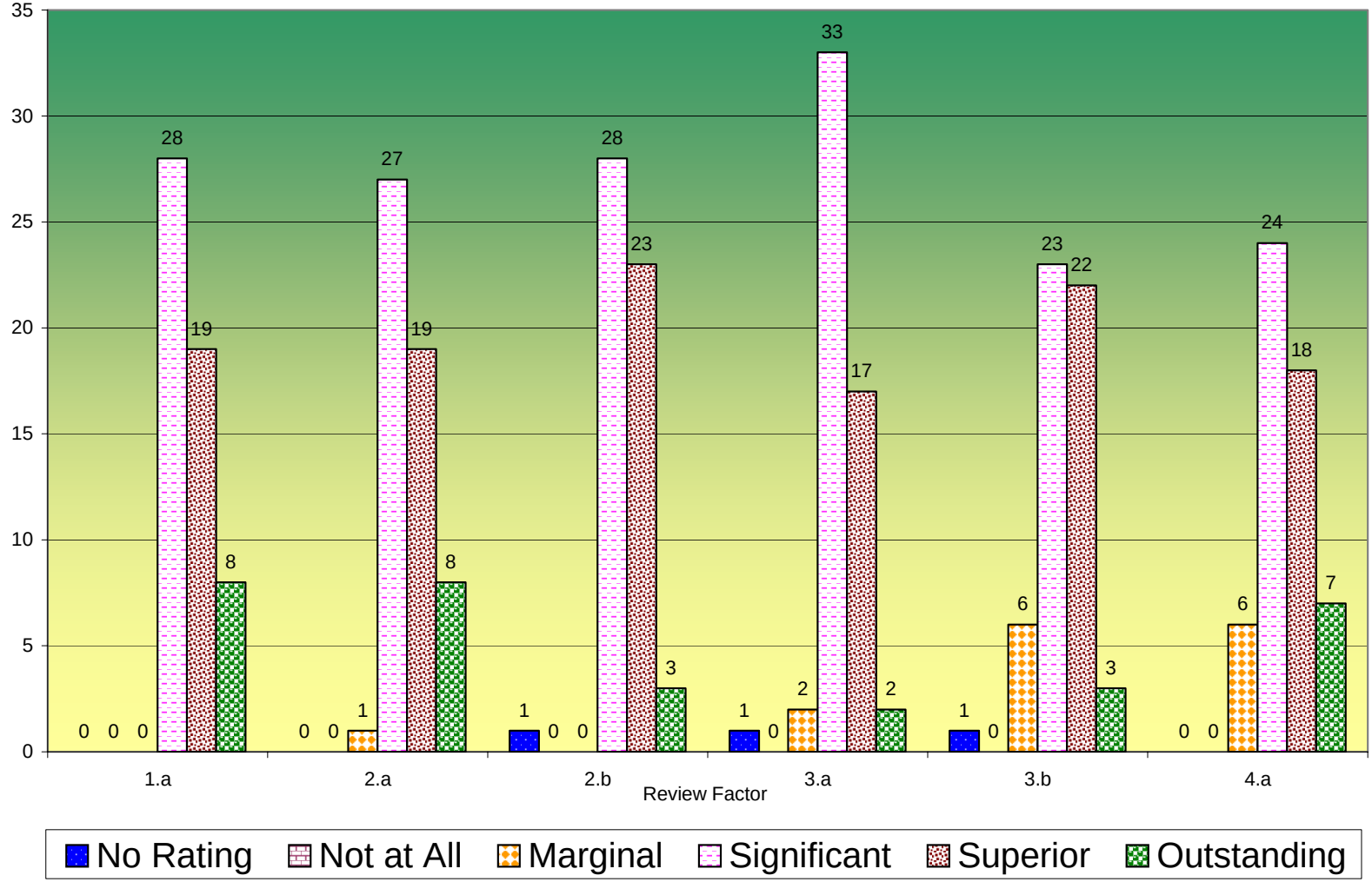
Fuel Processing Rating Data (1 of 2)

Reviewer Industry Team	No Rating	Not at All	Marginal	Significant	Superior	Outstanding
1.a	0	0	1	8	9	3
2.a	0	0	2	9	6	4
2.b	0	0	2	9	7	3
3.a	0	0	2	12	6	1
3.b	0	0	3	6	7	5
4.a	0	0	2	6	8	5
Sub-Total	0	0	12	50	43	21
National Laboratory	**No Rating**	**Not at All**	**Marginal**	**Significant**	**Superior**	**Outstanding**
1.a	0	0	1	4	3	0
2.a	0	0	3	5	0	0
2.b	0	0	2	6	0	0
3.a	0	0	3	3	2	0
3.b	0	0	4	3	1	0
4.a	0	0	2	6	0	0
Sub-Total	0	0	15	27	6	0
Government (non-DOE)	**No Rating**	**Not at All**	**Marginal**	**Significant**	**Superior**	**Outstanding**
1.a	0	0	0	0	1	7
2.a	0	0	0	0	0	8
2.b	0	0	0	0	0	8
3.a	0	0	0	0	2	6
3.b	0	0	0	0	0	8
4.a	0	0	0	2	1	5
Sub-Total	0	0	0	2	4	42

Fuel Processing Rating Data (2 of 2)

Reviewer Other	No Rating	Not at All	Marginal	Significant	Superior	Outstanding
1.a	0	0	0	1	7	2
2.a	0	0	0	1	8	1
2.b	0	0	0	1	7	2
3.a	0	0	0	5	5	0
3.b	0	0	0	3	3	4
4.a	0	0	0	0	6	4
Sub-Total	0	0	0	11	36	13
Factor Totals	**No Rating**	**Not at All**	**Marginal**	**Significant**	**Superior**	**Outstanding**
1.a	0	0	2	13	20	12
2.a	0	0	5	15	14	13
2.b	0	0	4	16	14	13
3.a	0	0	5	20	15	7
3.b	0	0	7	12	11	17
4.a	0	0	4	14	15	14
Rating Totals	0	0	27	90	89	76
Non-Industry Team Factor Totals	**No Rating**	**Not at All**	**Marginal**	**Significant**	**Superior**	**Outstanding**
1.a	0	0	1	5	11	9
2.a	0	0	3	6	8	9
2.b	0	0	2	7	7	10
3.a	0	0	3	8	9	6
3.b	0	0	4	6	4	12
4.a	0	0	2	8	7	9
Rating Totals	0	0	15	40	46	55

Modeling & Simulation



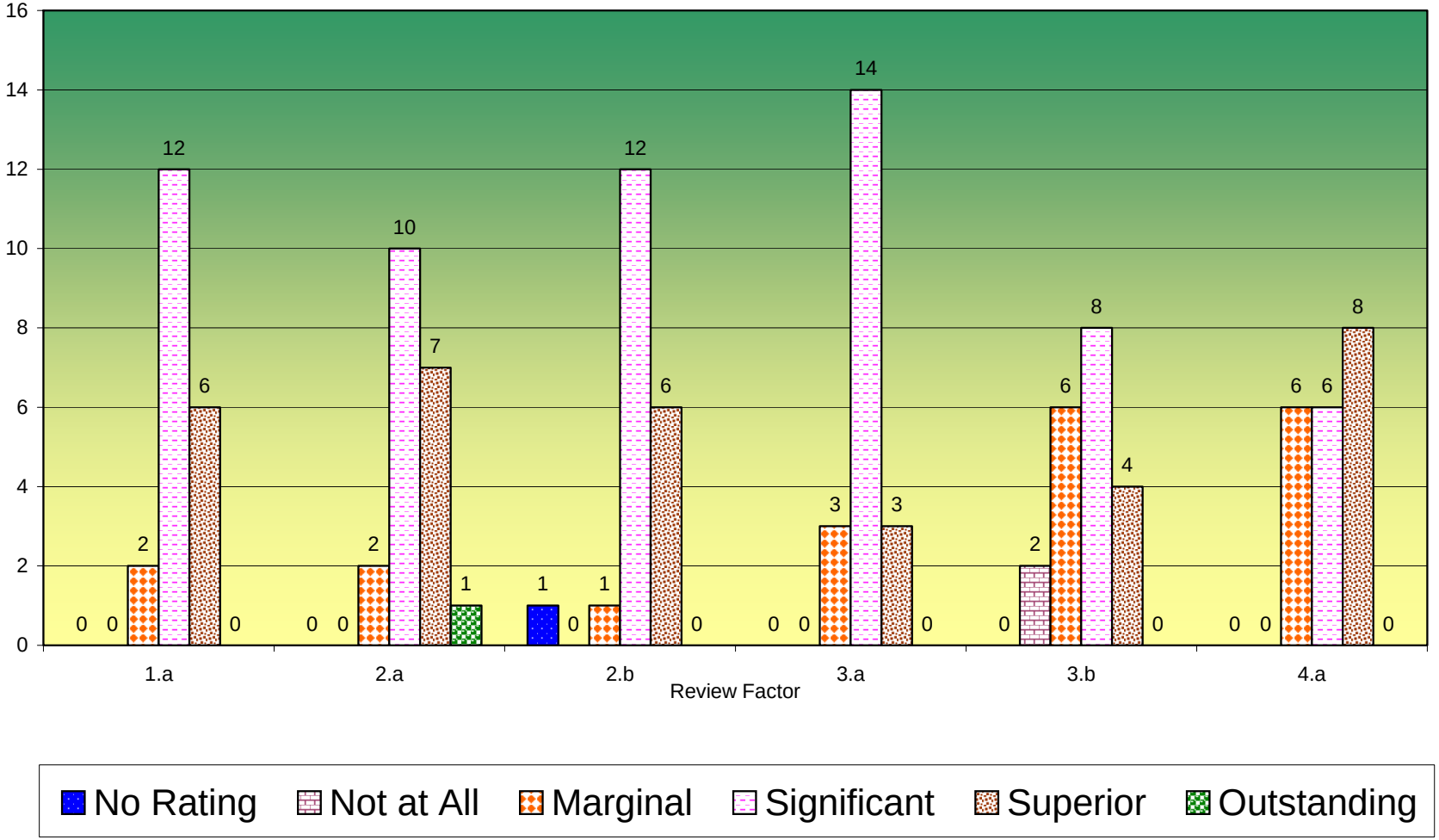
Modeling & Simulation Rating Data (1 of 2)

Reviewer Industry Team	No Rating	Not at All	Marginal	Significant	Superior	Outstanding
1.a	0	0	0	11	9	8
2.a	0	0	0	8	12	8
2.b	1	0	0	14	10	3
3.a	0	0	1	19	7	1
3.b	0	0	1	12	12	3
4.a	0	0	2	10	11	5
Sub-Total	1	0	4	74	61	28
National Laboratory	**No Rating**	**Not at All**	**Marginal**	**Significant**	**Superior**	**Outstanding**
1.a	0	0	0	7	2	0
2.a	0	0	1	7	1	0
2.b	0	0	0	6	3	0
3.a	0	0	1	6	2	0
3.b	0	0	4	3	2	0
4.a	0	0	1	7	1	0
Sub-Total	0	0	7	36	11	0
National Laboratory	**No Rating**	**Not at All**	**Marginal**	**Significant**	**Superior**	**Outstanding**
1.a	0	0	0	4	7	0
2.a	0	0	0	7	4	0
2.b	0	0	0	3	8	0
3.a	1	0	0	2	7	1
3.b	1	0	0	4	6	0
4.a	0	0	0	3	6	2
Sub-Total	2	0	0	23	38	3

Modeling & Simulation Rating Data (2 of 2)

Reviewer National Laboratory	No Rating No Rating	Not at All Not at All	Marginal Marginal	Significant Significant	Superior Superior	Outstanding Outstanding
1.a	0	0	0	6	1	0
2.a	0	0	0	5	2	0
2.b	0	0	0	5	2	0
3.a	0	0	0	6	1	0
3.b	0	0	1	4	2	0
4.a	0	0	3	4	0	0
Sub-Total	0	0	4	30	8	0
Factor Totals	**No Rating**	**Not at All**	**Marginal**	**Significant**	**Superior**	**Outstanding**
1.a	0	0	0	28	19	8
2.a	0	0	1	27	19	8
2.b	1	0	0	28	23	3
3.a	1	0	2	33	17	2
3.b	1	0	6	23	22	3
4.a	0	0	6	24	18	7
Rating Totals	3	0	15	163	118	31
Non-Industry Team Factor Totals	**No Rating**	**Not at All**	**Marginal**	**Significant**	**Superior**	**Outstanding**
1.a	0	0	0	17	10	0
2.a	0	0	1	19	7	0
2.b	0	0	0	14	13	0
3.a	1	0	1	14	10	1
3.b	1	0	5	11	10	0
4.a	0	0	4	14	7	2
Rating Totals	2	0	11	89	57	3

Power Electronics, Controls & Diagnostics



Power Electronics, Controls & Diagnostics Rating Data (1 of 2)

Reviewer Industry Team	No Rating	Not at All	Marginal	Significant	Superior	Outstanding
1.a	0	0	1	6	4	0
2.a	0	0	1	6	4	0
2.b	1	0	0	7	3	0
3.a	0	0	2	7	2	0
3.b	0	0	6	3	2	0
4.a	0	0	4	3	4	0
Sub-Total	1	0	14	32	19	0
National Laboratory	**No Rating**	**Not at All**	**Marginal**	**Significant**	**Superior**	**Outstanding**
1.a	0	0	0	3	0	0
2.a	0	0	0	2	1	0
2.b	0	0	0	3	0	0
3.a	0	0	0	2	1	0
3.b	0	1	0	2	0	0
4.a	0	0	1	1	1	0
Sub-Total	0	1	1	13	3	0
Government (non-DOE)	**No Rating**	**Not at All**	**Marginal**	**Significant**	**Superior**	**Outstanding**
1.a	0	0	0	1	2	0
2.a	0	0	0	0	2	1
2.b	0	0	0	1	2	0
3.a	0	0	0	3	0	0
3.b	0	0	0	1	2	0
4.a	0	0	1	0	2	0
Sub-Total	0	0	1	6	10	1

Power Electronics, Controls & Diagnostics Rating Data (2 of 2)

Reviewer Other	No Rating	Not at All	Marginal	Significant	Superior	Outstanding
1.a	0	0	1	2	0	0
2.a	0	0	1	2	0	0
2.b	0	0	1	1	1	0
3.a	0	0	1	2	0	0
3.b	0	1	0	2	0	0
4.a	0	0	0	2	1	0
Sub-Total	0	1	4	11	2	0
Factor Totals	**No Rating**	**Not at All**	**Marginal**	**Significant**	**Superior**	**Outstanding**
1.a	0	0	2	12	6	0
2.a	0	0	2	10	7	1
2.b	1	0	1	12	6	0
3.a	0	0	3	14	3	0
3.b	0	2	6	8	4	0
4.a	0	0	6	6	8	0
Rating Totals	1	2	20	62	34	1
Non-Industry Team Factor Totals	**No Rating**	**Not at All**	**Marginal**	**Significant**	**Superior**	**Outstanding**
1.a	0	0	1	6	2	0
2.a	0	0	1	4	3	1
2.b	0	0	1	5	3	0
3.a	0	0	1	7	1	0
3.b	0	2	0	5	2	0
4.a	0	0	2	3	4	0
Rating Totals	0	2	6	30	15	1