

July 6, 2023

Nancy Marconi, Registrar
Ontario Energy Board

Via Pivotal

Dear Ms Marconi:

Re: EB-2022-0200 -- EGI Rebasing (phase 1) – GEC Interim Costs

Please note that we have uploaded invoices for all claimants, however the EFG March invoice is uploaded for both Mr. Neme and again for Ms Hotaling as it includes hours for both and the EFG June invoice is uploaded for Mr. Neme and again for Mr. Gard as it includes hours for both.

Uploaded at Mr. Neme's participant level is an Excel sheet that captures all the consultant invoices and tallies them by task.

The interim cost claim is comprised of:

D.Poch legal fees:	81,048.00
D Poch HST:	10,536.27
C. Neme:	82,335.00
C Hotaling:	2,702.50
D. Gard	3,190.00
 Total Costs	 179,811.77

Sincerely,



David Poch

EB-2022-0200 : 1 : David Poch

COST CLAIM NUMBER 1449	SUBMISSION DEADLINE DATE July 12, 2023	CLAIM STATUS Approved by Finance
EB# EB-2022-0200: Rates: Distribution: Enbridge Gas Inc.	OTHER EB#S	PHASE #* 1
INTERVENOR Poch, David; +1 (613) 264-0055 dpoch@eelaw.ca	INTERVENOR COMPANY* Green Energy Coalition, Maberly: Cooperative	INTERVENOR TYPE Unregistered
HST RATE ONTARIO 0.00	EXCHANGE RATE	COUNTRY
HST NUMBER	LATE SUBMISSION ALLOWED No	EXTENSION DEADLINE DATE

PARTICIPANTS

New	Non-Filing Participant First, Last Name	Filing Participant	Total (\$)	Total Hours	Participant Claim Status
No	,	Neme, Chris; +1 (802) 482-5001 x.1 cneme@energyfuturesgroup.com	82,335.00	249.50	Submitted
Yes	David , Gard		3,190.00	11.00	Submitted
No	,	Poch, David; +1 (613) 264-0055 dpoch@eelaw.ca	91,584.27	245.60	Submitted
Yes	Chelsea , Hotaling		2,702.50	11.75	Submitted

ATTACHMENTS

Attachment	Document Type	Import Message
GEC Interim cost claim cov ltr.pdf	Cover Letter	
GEC EB-2022-0200 Cost Claim 070620231457.pdf		

TOTAL LEGAL/CONSULTANT/OTHER FEES
169,275.50

TOTAL DISBURSEMENTS
0.00

TOTAL HST
10,536.27

TOTAL CLAIM
179,811.77

TOTAL AMOUNT AWARDED

TOTAL HOURS CLAIMED
517.85

TOTAL HOURS DISALLOWED

REASON FOR
DISALLOWANCE

REASON FOR
DISALLOWANCE - 2

REASON FOR
DISALLOWANCE - 3

MAKE CHEQUE PAYABLE TO
David Poch in Trust

SEND PAYMENT TO ADDRESS
1649 Old Brooke Rd.
Maberly, ON
K0H 2B0

ATTENTION
David Poch

SUBMIT SECTION

I am a representative of the Party. I have examined all of the documentation in support of this cost claim. The costs incurred and time spent are directly related to the Party's participation in the OEB Process referred to above.

This cost claim does not include any costs for work done, or time spent, by a person that is an employee or officer of the Party as described in section 6.05 and 6.09 of the OEB's Practice Direction on Cost Awards.

The information (fees and disbursements) filed in this cost claim is complete and accurate and in accordance with the OEB's Practice Direction for Cost Awards and Appendix A, the Cost Awards Tariff.

SUBMITTED BY
David Poch

DATE SUBMITTED
July 06, 2023

CASE EB-2022-0200: Rates: Distribution: Enbridge Gas Inc.	COST CLAIM EB-2022-0200 : 1 : David Poch	INTERVENOR NAME Poch, David; +1 (613) 264-0055 dpoch@eelaw.ca	PARTICIPANT CLAIM STATUS Submitted
FILING PARTICIPANT Neme, Chris; +1 (802) 482-5001 x.1 cneme@energyfuturesgroup.com	NEW PARTICIPANT No	NON-FILING PARTICIPANT F. NAME	NON-FILING PARTICIPANT L. NAME
SERVICE PROVIDER TYPE* Consultant	YEAR CALLED TO BAR*	COMPLETED YEARS PRACTICING/YEARS OF RELEVANT EXPERIENCE* 37	HOURLY RATE 330
HST RATE CHARGED* 0.00	CV STATUS (FOR CONSULTANT/ANALYST) CV Attached	LAST CV DATE July 06, 2023	OVERRIDE HOURLY RATE No
HST NUMBER	HEARINGS Yes	CONSULTATIONS No	DISBURSEMENTS No

HEARINGS

Hearings Hours	Hearings Subtotal (\$)	Hearings Total Tax (\$)	Hearings Total (\$)			
249.50	82,335.00	0.00	82,335.00			
<u>Name</u>	<u>Hours</u>	<u>Hourly Rate</u>	<u>Sub Total</u>	<u>HST Rate</u>	<u>HST</u>	<u>Total</u>
REVIEW APPLICATION AND EVIDENCE						
Review Application and Evidence	20.75	330	6,847.50	0.00		6,847.50
DISCOVERY						
Preparation of Interrogatories	15.75	330	5,197.50	0.00		5,197.50
Review Interrogatory Responses	16.75	330	5,527.50	0.00		5,527.50
Technical Conference Preparation	20.50	330	6,765.00	0.00		6,765.00
Technical Conference Attendance	17.25	330	5,692.50	0.00		5,692.50
Technical Conference Follow Up		330		0.00		
ISSUES LIST						
Preparation	3.00	330	990.00	0.00		990.00
Attendance at Issues Conference		330		0.00		
INTERVENOR EVIDENCE						
Preparation	132.75	330	43,807.50	0.00		43,807.50
Interrogatory Responses	22.25	330	7,342.50	0.00		7,342.50
Preparation of Witness(es) for Attendance at Hearing		330		0.00		
SETTELEMENT CONFERENCE / ADR						
Preparation		330		0.00		
Attendance		330		0.00		

<u>Name</u>	<u>Hours</u>	<u>Hourly Rate</u>	<u>Sub Total</u>	<u>HST Rate</u>	<u>HST</u>	<u>Total</u>
Preparation of Settlement Proposal		330		0.00		
Attendance at Presentation to Panel		330		0.00		
ORAL HEARING						
Preparation	0.50	330	165.00	0.00		165.00
Attendance at Oral Hearing		330		0.00		
SUBMISSIONS						
Written Submissions		330		0.00		
Oral Submissions		330		0.00		
Attendance at Oral Submissions		330		0.00		
OTHER ATTENDANCE						
Other Attendance		330		0.00		
COMMUNICATION						
With Client		330		0.00		
With Other Parties		330		0.00		
MOTIONS						
Preparation of Motion(s) Materials		330		0.00		
Prepare Submissions on the Motion(s)		330		0.00		
Attendance at Hearing on Motion(s)		330		0.00		
CONFIDENTIALITY						
Preparation of Application for Confidentiality		330		0.00		
Prepare Submissions on Confidentiality		330		0.00		
Attendance at Hearing on Confidentiality		330		0.00		
DECISION						
Review		330		0.00		
RATE ORDER						
Review		330		0.00		
Prepare Submission on Rate Order		330		0.00		
TOTAL SERVICE PROVIDER FEES						
Total Service Provider Fees:	249.50		82,335.00	0.00		82,335.00

Attachments

<u>Attachment</u>	<u>Document Type</u>	<u>Import Message</u>
Job 1044 January 2023.pdf		
Job 1044 February 2023.pdf	Time Docket and Invoice	
Job 1044 March 2023.pdf	Time Docket and Invoice	
Job 1044 April 2023.pdf	Time Docket and Invoice	
Job 1044 May 2023.pdf	Time Docket and Invoice	
Job 1044 June 2023.pdf	Time Docket and Invoice	
Copy of Job 1044_110122-063023_EFG hours and tasks.xlsx	Time Docket	
Neme-CV.pdf	CV	
EFG-Energy Transition Experience.pdf	CV	

Hearings, Consultations, Disbursements Attachments

<u>Attachment</u>	<u>Document Type</u>	<u>Claim Type</u>	<u>Import Message</u>
Job 1044 January 2023.pdf		Hearings	
Job 1044 February 2023.pdf	Time Docket and Invoice	Hearings	
Job 1044 March 2023.pdf	Time Docket and Invoice	Hearings	
Job 1044 April 2023.pdf	Time Docket and Invoice	Hearings	
Job 1044 May 2023.pdf	Time Docket and Invoice	Hearings	
Job 1044 June 2023.pdf	Time Docket and Invoice	Hearings	
Copy of Job 1044_110122-063023_EFG hours and tasks.xlsx	Time Docket	Hearings	
Neme-CV.pdf	CV	Hearings	
EFG-Energy Transition Experience.pdf	CV	Hearings	

Energy Futures Group, Inc.

PO Box 587
Hinesburg, VT 05461
Phone: (802) 482-5001
Fax: (802) 329-2143



Invoice

TO: Green Energy Coalition
David Poch
1649 Old Brooke Road
Maberly, ON K0H 2B0
(613) 264-0055
dpoch@eelaw.ca

Invoice #: 5635
Job Name: Enbridge 2023 Rebasing Application
Project Manager: Chris Neme
Invoice Date: 2/6/2023
Invoice Period: 1/1/2023-1/31/2023
Terms: Net 30 Days

Consultant Labor	Job-Phase	Phase Description	Project	Project Description	Rate	Hours	Amount
Chris Neme	1044-01	Review Application and Evidence	01	Review Application and Evidence	\$330.00	5.00	\$1,650.00
Chris Neme	1044-02	Discovery	01	Preparation of Interrogatories	\$330.00	0.50	\$165.00
EFG Labor Subtotal:						5.50	\$1,815.00

TOTAL DUE THIS INVOICE:	\$1,815.00 CAD
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Energy Futures Group, Inc.

PO Box 587
Hinesburg, VT 05461
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Task Description

Invoice #:5635
Job Name: Enbridge 2023 Rebasing Application
Job Code: 1044
Invoice Period: 1/1/2023-1/31/2023
Consultant: Chris Neme

Date	Phase-Project	Project Description	Hours	Task Description
1/6/2023	01-01	Review Application and Evidence	4.00	Review Enbridge application
1/31/2023	01-01	Review Application and Evidence	1.00	review Enbridge filing
TOTAL:			5.00	
1/17/2023	02-01	Preparation of Interrogatories	0.50	feedback to GEC on possible IR questions
TOTAL:			0.50	

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Invoice

TO: Green Energy Coalition
David Poch
1649 Old Brooke Road
Maberly, ON K0H 2B0
(613) 264-0055
dpoch@eelaw.ca

Invoice #: 5712
Job Name: Enbridge 2023 Rebasing Application
Project Manager: Chris Neme
Invoice Date: 4/3/2023
Invoice Period: 2/1/2023-2/28/2023
Terms: Net 30 Days

Consultant Labor	Job-Phase	Phase Description	Project	Project Description	Rate	Hours	Amount
Chris Neme	1044-01	Review Application and Evidence	01	Review Application and Evidence	\$330.00	11.25	\$3,712.50
Chris Neme	1044-02	Discovery	01	Preparation of Interrogatories	\$330.00	15.25	\$5,032.50
Chris Neme	1044-03	Issues List	01	Preparation	\$330.00	1.50	\$495.00
EFG Labor Subtotal:						28.00	\$9,240.00

TOTAL DUE THIS INVOICE:	\$9,240.00 CAD
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Energy Futures Group, Inc.

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Hinesburg, VT 05461
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Task Description

Invoice #:5712
Job Name: Enbridge 2023 Rebasing Application
Job Code: 1044
Invoice Period: 2/1/2023-2/28/2023
Consultant: Chris Neme

Date	Phase-Project	Project Description	Hours Task Description
2/3/2023	01-01	Review Application and Evidence	1.00 review Enbridge filing
2/6/2023	01-01	Review Application and Evidence	3.75 review Enbridge filing
2/7/2023	01-01	Review Application and Evidence	1.50 Review Enbridge filing
2/8/2023	01-01	Review Application and Evidence	1.50 Review Enbridge filing
2/9/2023	01-01	Review Application and Evidence	1.50 Review Enbridge filing
2/10/2023	01-01	Review Application and Evidence	2.00 Review Enbridge filing
TOTAL:			11.25
2/6/2023	02-01	Preparation of Interrogatories	3.75 draft IRs on Enbridge filing
2/7/2023	02-01	Preparation of Interrogatories	2.50 Draft IRs
2/8/2023	02-01	Preparation of Interrogatories	4.00 Draft IRs, call w/GEC, ED
2/9/2023	02-01	Preparation of Interrogatories	4.00 Draft IRs
2/10/2023	02-01	Preparation of Interrogatories	1.00 Draft new IRs
TOTAL:			15.25
2/16/2023	03-01	Preparation	0.50 discuss research items and approach w/Chelsea H.
2/17/2023	03-01	Preparation	1.00 research on hydrogen & depreciation issues, communications w/ED, GEC
TOTAL:			1.50

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Invoice

TO: Green Energy Coalition
David Poch
1649 Old Brooke Road
Maberly, ON K0H 2B0
(613) 264-0055
dpoch@eelaw.ca

Invoice #: 5850
Job Name: Enbridge 2023 Rebasing Application
Project Manager: Chris Neme
Invoice Date: 7/6/2023
Invoice Period: 3/1/2023-3/31/2023
Terms: Net 30 Days

Consultant Labor	Job-Phase	Phase Description	Project	Project Description	Rate	Hours	Amount
Chris Neme	1044-02	Discovery	02	Review Interrogatory Responses	\$330.00	13.50	\$4,455.00
Chris Neme	1044-02	Discovery	03	Technical Conferences Preparation	\$330.00	17.25	\$5,692.50
Chris Neme	1044-02	Discovery	04	Technical Conference Attendance	\$330.00	11.75	\$3,877.50
Chelsea Hotaling	1044-04	Intervenor Evidence	01	Preparation	\$230.00	11.75	\$2,702.50
Chris Neme	1044-04	Intervenor Evidence	01	Preparation	\$330.00	28.75	\$9,487.50
EFG Labor Subtotal:						83.00	\$26,215.00

TOTAL DUE THIS INVOICE:	\$26,215.00 CAD
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Task Description

Invoice #:5850
Job Name: Enbridge 2023 Rebasing Application
Job Code: 1044
Invoice Period: 3/1/2023-3/31/2023
Consultant: Chelsea Hotaling

Date	Phase-Project	Project Description	Hours	Task Description
3/12/2023	04-01	Preparation	3.25	Researching examples of accelerated depreciation and hydrogen in residential homes
3/13/2023	04-01	Preparation	3.50	Hydrogen research
3/14/2023	04-01	Preparation	4.25	Call with Chris; Emails to contacts about examples; Research in MA and NY on accelerated depreciation examples
3/17/2023	04-01	Preparation	0.75	Reorganizing hydrogen notes for Chris; Call with Richard from RAP about hydrogen ready appliances
TOTAL:			11.75	

Energy Futures Group, Inc.

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**Task Description**

Invoice #:5850
Job Name: Enbridge 2023 Rebasing Application
Job Code: 1044
Invoice Period: 3/1/2023-3/31/2023
Consultant: Chris Neme

Date	Phase-Project	Project Description	Hours	Task Description
3/13/2023	02-02	Review Interrogatory Responses	3.50	Review Enbridge IR responses
3/14/2023	02-02	Review Interrogatory Responses	5.00	Review Enbridge IR responses
3/15/2023	02-02	Review Interrogatory Responses	2.00	review and analyze IR responses
3/16/2023	02-02	Review Interrogatory Responses	3.00	review and analyze IR responses
TOTAL:			13.50	
3/14/2023	02-03	Technical Conferences Preparation	1.25	Tech conf. prep; call w/GEC, ED
3/17/2023	02-03	Technical Conferences Preparation	3.00	draft tech conf questions
3/19/2023	02-03	Technical Conferences Preparation	1.00	work on Tech Conf questions; send NDA for Guidehouse model
3/20/2023	02-03	Technical Conferences Preparation	7.00	draft Q's for Tech conf
3/21/2023	02-03	Technical Conferences Preparation	2.00	prep for and participate in mtg w/Guidehouse on decarb model
3/22/2023	02-03	Technical Conferences Preparation	3.00	prep Q's for tech conference panel 2
TOTAL:			17.25	
3/22/2023	02-04	Technical Conference Attendance	4.75	attend tech conference, ask Q's on behalf of GEC
3/23/2023	02-04	Technical Conference Attendance	7.00	attend tech conference, ask Q's on behalf of GEC
TOTAL:			11.75	
3/15/2023	04-01	Preparation	0.50	research on hydrogen applications in buildings
3/17/2023	04-01	Preparation	1.50	research on hydrogen applications in buildings
3/24/2023	04-01	Preparation	3.00	analysis of electrification load shapes, economics
3/27/2023	04-01	Preparation	5.50	work on testimony
3/28/2023	04-01	Preparation	6.00	work on testimony

3/29/2023	04-01	Preparation	5.50 work on testimony
3/30/2023	04-01	Preparation	3.25 work on testimony outline
3/31/2023	04-01	Preparation	3.50 work on evidence outline
TOTAL:			28.75

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Invoice

TO: Green Energy Coalition
David Poch
1649 Old Brooke Road
Maberly, ON K0H 2B0
(613) 264-0055
dpoch@eelaw.ca

Invoice #: 5767
Job Name: Enbridge 2023 Rebasing Application
Project Manager: Chris Neme
Invoice Date: 5/3/2023
Invoice Period: 4/1/2023-4/30/2023
Terms: Net 30 Days

Consultant Labor	Job-Phase	Phase Description	Project	Project Description	Rate	Hours	Amount
Chris Neme	1044-01	Review Application and Evidence	01	Review Application and Evidence	\$330.00	4.50	\$1,485.00
Chris Neme	1044-02	Discovery	02	Review Interrogatory Responses	\$330.00	2.00	\$660.00
Chris Neme	1044-02	Discovery	03	Technical Conferences Preparation	\$330.00	3.25	\$1,072.50
Chris Neme	1044-02	Discovery	04	Technical Conference Attendance	\$330.00	5.50	\$1,815.00
Chris Neme	1044-04	Intervenor Evidence	01	Preparation	\$330.00	73.75	\$24,337.50
EFG Labor Subtotal:						89.00	\$29,370.00

TOTAL DUE THIS INVOICE:	\$29,370.00 CAD
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Energy Futures Group, Inc.

PO Box 587
Hinesburg, VT 05461
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Task Description

Invoice #:5767
Job Name: Enbridge 2023 Rebasing Application
Job Code: 1044
Invoice Period: 4/1/2023-4/30/2023
Consultant: Chris Neme

Date	Phase-Project	Project Description	Hours	Task Description
4/24/2023	01-01	Review Application and Evidence	2.00	review revised P2NZ report
4/25/2023	01-01	Review Application and Evidence	2.50	Review revised P2NZ report
TOTAL:			4.50	
4/25/2023	02-02	Review Interrogatory Responses	2.00	Review revised IR responses
TOTAL:			2.00	
4/12/2023	02-03	Technical Conferences Preparation	2.50	review Guidehouse undertakings, draft list of questions and send to Enbridge for informal discussion
4/24/2023	02-03	Technical Conferences Preparation	0.50	work on questions for 2nd tech conference
4/26/2023	02-03	Technical Conferences Preparation	0.25	refine tech conf questions w/D.Poch
TOTAL:			3.25	
4/27/2023	02-04	Technical Conference Attendance	5.50	attend technical conference
TOTAL:			5.50	
4/1/2023	04-01	Preparation	1.50	edit testimony outline, begin testimony writing
4/3/2023	04-01	Preparation	5.50	draft testimony
4/4/2023	04-01	Preparation	5.50	work on testimony
4/5/2023	04-01	Preparation	7.50	work on testimony
4/6/2023	04-01	Preparation	4.00	work on testimony
4/7/2023	04-01	Preparation	4.50	work on report
4/8/2023	04-01	Preparation	1.00	work on testimony
4/9/2023	04-01	Preparation	3.50	work on testimony
4/10/2023	04-01	Preparation	6.75	work on report
4/11/2023	04-01	Preparation	4.75	work on report
4/13/2023	04-01	Preparation	6.50	work on report

4/14/2023	04-01	Preparation	4.25 work on report
4/15/2023	04-01	Preparation	4.00 Work on report
4/16/2023	04-01	Preparation	4.00 work on report
4/17/2023	04-01	Preparation	7.50 work on report
4/30/2023	04-01	Preparation	3.00 work on testimony

TOTAL:			73.75
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Invoice

TO: Green Energy Coalition
David Poch
1649 Old Brooke Road
Maberly, ON K0H 2B0
(613) 264-0055
dpoch@eelaw.ca

Invoice #: 5807
Job Name: Enbridge 2023 Rebasing Application
Project Manager: Chris Neme
Invoice Date: 6/5/2023
Invoice Period: 5/1/2023-5/31/2023
Terms: Net 30 Days

Consultant Labor	Job-Phase	Phase Description	Project	Project Description	Rate	Hours	Amount
Chris Neme	1044-02	Discovery	02	Review Interrogatory Responses	\$330.00	1.25	\$412.50
Chris Neme	1044-04	Intervenor Evidence	01	Preparation	\$330.00	30.25	\$9,982.50
Chris Neme	1044-04	Intervenor Evidence	02	Interrogatory Responses	\$330.00	22.25	\$7,342.50
EFG Labor Subtotal:						53.75	\$17,737.50

TOTAL DUE THIS INVOICE:	\$17,737.50 CAD
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Energy Futures Group, Inc.

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Hinesburg, VT 05461
Phone: (802) 482-5001
Fax: (802) 329-2143



Task Description

Invoice #:5807
Job Name: Enbridge 2023 Rebasing Application
Job Code: 1044
Invoice Period: 5/1/2023-5/31/2023
Consultant: Chris Neme

Date	Phase-Project	Project Description	Hours	Task Description
5/9/2023	02-02	Review Interrogatory Responses	1.25	Review Guidehouse undertaking responses, feedback to GEC
TOTAL:			1.25	
5/1/2023	04-01	Preparation	4.25	testimony edits
5/2/2023	04-01	Preparation	7.00	testimony edits
5/3/2023	04-01	Preparation	4.50	edit testimony, call w/clients
5/6/2023	04-01	Preparation	6.00	testimony edits
5/7/2023	04-01	Preparation	4.00	testimony revisions
5/8/2023	04-01	Preparation	4.00	discuss draft evidence w/ED, GEC; edit evidence
5/9/2023	04-01	Preparation	0.50	review draft evidence
TOTAL:			30.25	
5/18/2023	04-02	Interrogatory Responses	1.50	work on IR responses to EGI
5/19/2023	04-02	Interrogatory Responses	5.00	work on IR responses to EGI
5/20/2023	04-02	Interrogatory Responses	0.50	work on IR response to EGI
5/21/2023	04-02	Interrogatory Responses	3.25	work on interrogatory responses to EGI
5/22/2023	04-02	Interrogatory Responses	2.50	work on draft response to Energy Probe; edit draft responses to EGI
5/23/2023	04-02	Interrogatory Responses	4.00	draft responses to Staff, Energy Probe IRs; edit draft responses to EGI IRs
5/24/2023	04-02	Interrogatory Responses	5.00	discuss draft IR responses w/K.Elson, D.Poch; finalize edits and send; update evidence and send
5/30/2023	04-02	Interrogatory Responses	0.50	finalize report corrections raised by IRs
TOTAL:			22.25	

Energy Futures Group, Inc.

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Invoice

TO: Green Energy Coalition
David Poch
1649 Old Brooke Road
Maberly, ON K0H 2B0
(613) 264-0055
dpoch@eelaw.ca

Invoice #: 5851
Job Name: Enbridge 2023 Rebasing Application
Project Manager: Chris Neme
Invoice Date: 7/6/2023
Invoice Period: 6/1/2023-6/30/2023
Terms: Net 30 Days

Consultant Labor	Job-Phase	Phase Description	Project	Project Description	Rate	Hours	Amount
Chris Neme	1044-06	Oral Hearing	01	Preparation	\$330.00	0.50	\$165.00
EFG Labor Subtotal:						0.50	\$165.00

Subcontractor	Job-Phase-Project	Project Description	Amount
5 Lakes Energy, LLC	1044-04-01	Preparation	\$3,190.00
Subcontractor Subtotal:			\$3,190.00

TOTAL DUE THIS INVOICE:	\$3,355.00 CAD
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Energy Futures Group, Inc.

PO Box 587

Hinesburg, VT 05461

Phone: (802) 482-5001

Fax: (802) 329-2143



Task Description

Invoice #:5851

Job Name: Enbridge 2023 Rebasing Application

Job Code: 1044

Invoice Period: 6/1/2023-6/30/2023

Consultant: Chris Neme

Date	Phase-Project	Project Description	Hours	Task Description
6/23/2023	06-01	Preparation	0.50	assist D.Poch with prep for hearing cross
TOTAL:			0.50	

Professional Summary

Chris specializes in analysis of markets for energy efficiency, demand response, renewable energy and strategic electrification measures, as well as the design and evaluation of programs and policies to promote them. During his 25+ years in the industry, he has worked for energy regulators, utilities, government agencies and advocacy organizations in 30+ states, 7 Canadian provinces and several European countries. He has filed expert witness testimony in 60+ cases before regulatory commissions in 13 different jurisdictions; he has also testified before several state legislatures. Chris has authored numerous reports and papers on clean energy policies and programs, including the National Standard Practice Manual for Benefit Cost Analysis of Distributed Energy Resources (2020), the predecessor NSPM for energy efficiency (2017), and several reports on electric non-wires and gas non-pipe alternatives.

Experience

2010-present: Principal, Energy Futures Group, Hinesburg, VT

1999-2010: Director of Planning & Evaluation, Vermont Energy Investment Corp., Burlington, VT

1993-1999: Senior Analyst, Vermont Energy Investment Corp., Burlington, VT

1992-1993: Energy Consultant, Lawrence Berkeley National Laboratory, Gaborone, Botswana

1986-1991: Senior Policy Analyst, Center for Clean Air Policy, Washington, DC

Education

M.P.P., University of Michigan, 1986

B.A., Political Science, University of Michigan, 1985

Selected Projects

- **Natural Resources Defense Council (Illinois, Michigan and Ohio).** Critically review efficiency, demand response, electrification, distribution system investment and integrated resource plans filed by IL, MI and OH utilities. Draft/defend regulatory testimony on critiques. Represent NRDC in regular stakeholder-utility engagement processes. Represent NRDC in collaborative development of non-wires solution pilots. Support development of Illinois clean energy legislation. (2010 to present)
- **E4TheFuture.** Co-authored National Standard Practice Manual Benefit Cost-Analysis of Distributed Energy Resources (2020) and NSPM for efficiency (2017). Present the NSPM to audiences across the U.S. and Canada; helping several to assess how to use it to refine current practices. (2016-present)
- **Vermont Agency of Natural Resources.** Supported EFG/Cadmus team in analysis of pathways for achieving the state's Global Warming Solutions Action emission reduction requirements, including marginal abatement cost curve development (2022). Supporting new assessment of emissions and cost tradeoffs between policy options for decarbonizing buildings and industry sectors (2023).

Energy Futures Group, Inc

PO Box 587, Hinesburg, VT 05461 – USA | ☎ 802-482-2625 | @cneme@energyfuturesgroup.com

- **Connecticut Energy Efficiency Board.** Part of team providing on-going review and input on utility efficiency program planning and related policy issues. Lead role in providing input on New England Avoided Energy Supply Cost study and cost-effectiveness screening policy issues. (2019-present)
- **Ontario Energy Board.** Appointed to serve on provincial gas DSM Evaluation Advisory Committee, providing input on multi-year evaluation plans, scopes of work for evaluation studies and independent evaluator assessments of utilities' annual gas savings claims. Also serve on gas IRP committee, providing input on non-pipe alternatives, including cost-effectiveness analyses and selection of pilot projects. Previously also appointed to advisory committees on gas and electric efficiency potential studies and advisory committee on carbon price forecast studies. (2015-present)
- **Green Energy Coalition (Ontario).** Represent coalition of environmental groups in regulatory proceedings, utility negotiations and stakeholder meetings on DSM policies, utility proposed DSM Plans, integrated resource planning and rules governing non-pipe alternatives. (1993 to present)
- **Energy Action Network (Vermont).** Co-authored a white paper on the concept of a "Clean Heat Standard" – a kind of renewable portfolio standard that would impose increasing obligations on Vermont Gas and wholesale suppliers of fuel oil and propane to reduce greenhouse gas emissions from burning of fossil fuels in homes and businesses, consistent with the state's Global Warming Solutions Act requirements (e.g., 40% reduction by 2030). Co-leading related voluntary working group of interested parties providing input on the design of the policy. Testified before Vermont House Energy and Technology Committee on Clean Heat Standard legislation. (2020-present)
- **Sierra Club (Massachusetts).** Supported Sierra Club's participation in an year-long process in which the Massachusetts' gas utilities engaged with stakeholders to discuss and consider the future of the gas industry in the context of decarbonization policy goals. Reviewed draft inputs to technical study of options for decarbonizing the gas industry presented to the group and assisted in drafting regulatory comments on final study results as well as gas utility policy proposals. (2021-2022).
- **Environmental Law and Policy Center.** Filed expert witness testimony supporting AEP Ohio's initial proposal to run a portfolio of efficiency programs and in opposition to a proposed rate case settlement agreement to eliminate such programs. (2021)
- **Sierra Club (Maryland).** Provided strategic support on testimony on cost-effectiveness and other rules governing expansion of gas infrastructure to connect additional customers. (2021)
- **New Jersey Board of Public Utilities.** Served on management team responsible for statewide delivery of New Jersey Clean Energy Programs. Led strategic planning; support regulatory filings, cost-effectiveness analysis & evaluation work. (2015 to 2020). Served on management team for start-up of residential and renewables programs for predecessor project. (2006-2010)
- **Regulatory Assistance Project - U.S.** Provided guidance on efficiency policy and programs. Lead author on strategic reports on program options for decarbonizing Vermont buildings, achieving 30% electricity savings in 10 years, using efficiency to defer T&D system investments, & bidding efficiency into capacity markets. (2010 to 2020)
- **Energy Efficiency Alberta.** Assisted EEA in providing input to Alberta Utilities Commission on the role efficiency resources can play in reducing electric system costs. (2019 to 2020)

- **Consumers Association of Canada (Manitoba) and Winnipeg Harvest.** Critically reviewed and filed regulatory testimony on Efficiency Manitoba's first three-year plan (2020-2023), with particular emphasis on the extent to which the plan supported advanced heat pump technology as both an electric efficiency measure and a key to future building electrification. (2019-2020).
- **Citizens Action Coalition of Indiana.** Critically reviewed how energy efficiency resources were modeled in utility IRPs, as well as the design of energy efficiency program portfolios. (2018 to 2020)
- **Efficiency Vermont.** Provided technical support in review of avoided cost assumptions, as well as related policies on cost-effectiveness analyses of efficiency resources (2019).
- **Earth Justice and Southern Alliance for Clean Energy.** Helped critically review Florida utilities' efficiency potential studies and proposed 2020-2024 energy efficiency savings targets. (2019)
- **New Hampshire Office of the Consumer Advocate.** Drafted expert witness testimony on the merits of utilities adding a pilot non-wires solution project to their efficiency program plans. (2018)
- **Regulatory Assistance Project - Europe.** Provide on-going support on efficiency policies and programs in the United Kingdom, Germany, and other countries. Reviewed draft European Union policies on Energy Savings Obligations, EM&V protocols, and related issues. Drafted policy brief on efficiency feed-in-tariffs and roadmap for residential retrofits. (2009 to 2018)
- **Green Mountain Power (Vermont).** Supported development and implementation of GMP's first compliance plan for Vermont RPS Tier 3 requirement to reduce customers' direct consumption of fossil fuels, with significant emphasis on strategic electrification strategies. Also developed 10-year forecast of sales that could result from three different levels of policy/program promotion of residential electric space heating, electric water heating and electric vehicles. (2016 to 2018)
- **Alberta Energy Efficiency Alliance.** Drafted white paper how treatment of "efficiency as a resource" could be institutionalized in Alberta. The paper followed several presentations to government agencies and others on behalf of the Pembina Institute. (2017 to 2018)
- **Southern Environmental Law Center.** Assessed reasonableness of Duke Energy's historic efficiency program savings claims, as well as the design of their efficiency program portfolios for 2019. Filed expert witness testimony on findings in North Carolina dockets (2018).
- **Toronto Atmospheric Fund.** Helped draft an assessment of efficiency potential from retrofitting of cold climate heat pumps into electrically heated multi-family buildings (2017).
- **Northeast Energy Efficiency Partnerships.** Helped manage Regional EM&V forum project estimating savings for emerging technologies, including field study of cold climate heat pumps. Led assessment of best practices on use of efficiency to defer T&D investment. (2009 to 2015)
- **Ontario Power Authority.** Managed jurisdictional scans on leveraging building efficiency labeling/disclosure requirements and non-energy benefits in cost-effectiveness screening. Supported staff workshop on the role efficiency can play in deferring T&D investments. Presented on efficiency trends for Advisory Council on Energy Efficiency. (2012-2015)
- **Vermont Public Interest Research Group.** Conducted comparative analysis of the economic and environmental impacts of fuel-switching from oil/propane heating to either natural gas or efficient, cold climate electric heat pumps. Filed regulatory testimony on findings. (2014-2015)

- **New Hampshire Electric Co-op.** Led assessment of the co-op's environmental and social responsibility programs' promotion of whole building efficiency retrofits, cold climate heat pumps and renewable energy systems. Presented recommendations to the co-op Board. (2014)
- **National Association of Regulatory Utility Commissioners (NARUC).** Assessed alternatives to 1st year savings goals to eliminate disincentives to invest in longer-lived savings. (2013)
- **California Investor-Owned Utility.** Senior advisor on EFG project to analyze 10 leading U.S. utility portfolios to determine if there are differences in the cost of saved energy related to utility spending in specific non-incentive categories, including administration, marketing, and EM&V. (2013)
- **DC Department of the Environment (Washington DC).** Part of VEIC team administering the DC Sustainable Energy Utility (SEU). Helped characterize the DC efficiency market and supporting the design of efficiency programs that the SEU will be implementing. (2011 to 2012)
- **Ohio Sierra Club.** Filed and defended expert witness testimony on the implications of not fully bidding all efficiency resources into the PJM capacity market. (2012)
- **Regulatory Assistance Project – Global.** Assisted RAP in framing several global research reports. Co-authored the first report – an extensive “best practices guide” on government policies for achieving energy efficiency objectives, drawing on experience with a variety of policy mechanism employed around the world. (2011)
- **Tennessee Valley Authority.** Assisted CSG team providing input to TVA on the redesign of its residential efficiency program portfolio to meet aggressive new five-year savings goals. (2010)
- **New York State Energy Research and Development Authority (NYSERDA).** Led residential & renewables portions of several statewide efficiency potential studies. (2001 to 2010)
- **Ohio Public Utilities Commission.** Senior Advisor to a project to develop a web-based Technical Reference Manual (TRM). The TRM includes deemed savings assumptions, deemed calculated savings algorithms and custom savings protocols. It was designed to serve as the basis for all electric and gas efficiency program savings claims in the state. (2009 to 2010)
- **Vermont Electric Power Company.** Led residential portion of efficiency potential study to assess alternatives to new transmission line. Testified before Public Service Board. (2001-2003)
- **Efficiency Vermont.** Served on Sr. Management team. Supported initial project start-up. Oversaw residential planning, input to regulators on evaluation, input to regional EM&V forum, development of M&V plan and other aspects of bidding efficiency into New England's Forward Capacity Market (FCM), and development and updating of nation's first TRM. (2000 to 2010)
- **Long Island Power Authority Clean Energy Plan.** Led team that designed the four major residential programs (three efficiency, one PV) incorporated into the plan in 1999. Oversaw extensive technical support to the implementation of those programs. This involved assistance with the development of goals and budgets, development of savings algorithms, cost-effectiveness screening, and on-going program design refinements. (1998 to 2009)

Selected Publications and Reports

- *Cost Savings and CO₂ Emission Reductions of Residential Electrification in Peoples Gas Territory*, prepared for the Natural Resources Defense Council, November 2022 (with David Hill & Liz Bourguet)
- *Tip of the Spear: How Efficiency Programs Supporting Cold Climate Heat Pumps in Low Income Multi-Family Buildings Could Help Lay the Foundation for Building Decarbonization in Michigan and Illinois*, 2022 ACEEE Summer Study on Energy Efficiency in Buildings (with Laura Goldberg, Valeria Rincon and Samantha Williams)
- *The Clean Heat Standard*, Vermont Energy Action Network (EAN) White Paper, December 2021 (with Richard Cowart)
- *National Standard Practice Manual for Benefit Cost Analysis of Distributed Energy Resources*, August 2020, (with Tim Woolf and others)
- *Reducing CO₂ Emissions from Vermont Buildings: Potential and Cost-Effectiveness of Select Program Options*, Regulatory Assistance Project, February 13, 2019 (with Richard Faesy)
- *Pumping Energy Savings: Recommendations for Accelerating Heat Pump Adoption in Ontario's Electrically Heated Multi-Residential Buildings*, Toronto Atmospheric Fund, July 2018 (with Devon Calder, Brian Purcell and Judy Simon)
- *National Standard Practice Manual for Assessing Cost-Effectiveness of Energy Efficiency Resources*, Edition 1, Spring 2017 (with Tim Woolf, Marty Kushler, Steven Schiller and Tom Eckman)
- *The Next Quantum Leap in Efficiency: 30% Electricity Savings in 10 Years*, Proceedings of the 2016 ACEEE Summer Study on Energy Efficiency in Buildings, Volume 9, pp. 1-14 (with Jim Grevatt, Rich Sedano and Dave Farnsworth)
- *The Next Quantum Leap in Efficiency: 30% Electricity Savings in Ten Years*, published by the Regulatory Assistance Project, February 2016 (with Jim Grevatt)
- *Energy Efficiency as a T&D Resource: Lessons from Recent U.S. Efforts to Use Geographically Targeted Efficiency Programs to Defer T&D Investments*, published by Northeast Energy Efficiency Partnerships, January 9, 2015 (with Jim Grevatt)
- *Unleashing Energy Efficiency: The Best Way to Comply with EPA's Clean Power Plan*, Public Utilities Fortnightly, October 2014, pp. 30-38 (with Tim Woolf, Erin Malone and Robin LeBaron)
- *The Resource Value Framework: Reforming Energy Efficiency Cost-Effectiveness Screening*, published by the National Efficiency Screening Project, August 2014 (with Tim Woolf et al.)
- *U.S. Experience with Participation of Energy Efficiency in Electric Capacity Markets*, Regulatory Assistance Project, August 2014 (with Richard Cowart)
- *The Positive Effects of Energy Efficiency on the German Electricity Sector*, IEPEC 2014 Conference, September 2014 (with Friedrich Seefeldt et al.)

- *Final Report: Alternative Michigan Energy Savings Goals to Promote Longer Term Savings and Address Small Utility Challenges*, prepared for the Michigan Public Service Commission, September 13, 2013 (with Optimal Energy)
- *Energy Efficiency Feed-in-Tariffs: Key Policy and Design Considerations*, Proceedings of ECEEE 2013 Summer Study, pp 305-315 (with Richard Cowart)
- *Can Competition Accelerate Energy Savings? Options and Challenges for Efficiency Feed-in-Tariffs*, published in *Energy & Environment*, Volume 24, No. 1-2, February 2013 (with Richard Cowart)
- *An Energy Efficiency Feed-in-Tariff: Key Policy and Design Considerations*, published by the Regulatory Assistance Project, March/April 2012 (with Richard Cowart)
- *U.S. Experience with Efficiency as a Transmission and Distribution System Resource*, published by the Regulatory Assistance Project, February 2012 (with Rich Sedano)
- *Achieving Energy Efficiency: A Global Best Practices Guide on Government Policies*, published by the Regulatory Assistance Project, February 2012 (with Nancy Wasserman)
- *Residential Efficiency Retrofits: A Roadmap for the Future*, published by the Regulatory Assistance Project, May 2011 (with Meg Gottstein and Blair Hamilton)
- *Is it Time to Ditch the TRC?* Proceedings of ACEEE 2010 Summer Study on Energy Efficiency in Buildings, Volume 5 (with Marty Kushler)
- *Energy Efficiency as a Resource in the ISO New England Forward Capacity Market*, in *Energy Efficiency*, published on line 06 June 2010 (with Cheryl Jenkins and Shawn Enterline)
- *A Comparison of Energy Efficiency Programmes for Existing Homes in Eleven Countries*, prepared for the British Department of Energy and Climate Change, 19 February, 2010 (with Blair Hamilton et al.)
- *Energy Efficiency as a Resource in the ISO New England Forward Capacity Market*, Proceedings of the 2009 European Council on an Energy Efficient Economy Summer Study, pp. 175-183 (with Cheryl Jenkins and Shawn Enterline)
- *Playing with the Big Boys: Energy Efficiency as a Resource in the ISO New England Forward Capacity Market*, Proceedings of ACEEE 2008 Summer Study Conference on Energy Efficiency in Buildings, Volume 5 (with Cheryl Jenkins and Blair Hamilton)
- *Recommendations for Community-Based Energy Program Strategies, Final Report*, developed for the Energy Trust of Oregon, June 1, 2005 (with Dave Hewitt et al.)
- *Shareholder Incentives for Gas DSM: Experience with One Canadian Utility*, Proceedings of ACEEE 2004 Summer Study on Energy Efficiency in Buildings, Volume 5 (with Kai Millyard)
- *Cost Effective Contributions to New York's Greenhouse Gas Emission Reduction Targets from Energy Efficiency and Renewable Energy Resources*, ACEEE 2004 Summer Study Proceedings, Volume 8 (with David Hill et al.)
- *Opportunities for Accelerated Electric Energy Efficiency Potential in Quebec: 2005-2012*, prepared for Regroupement national des conseils regionaux de l'environnement du Quebec, Regroupement des organismes environnementaux energie and Regroupement pour la

responsabilite sociale des entreprises, May 16, 2004 (with Eric Belliveau, John Plunkett and Phil Dunsky)

- *Review of Connecticut's Conservation and Load Management Administrator Performance, Plans and Incentives*, for Connecticut Office of Consumer Counsel, October 31, 2003 (with John Plunkett, Phil Mosenthal, Stuart Slote, Francis Wyatt, Bill Kallock and Paul Horowitz)
- *Energy Efficiency and Renewable Energy Resource Development Potential in New York State*, for New York Energy Research and Development Authority, August 2003 (with John Plunkett, Phil Mosenthal, Steve Nadel, Neal Elliott, David Hill and Christine Donovan)
- *Assessment of Economically Deliverable Transmission Capacity from Targeted Energy Efficiency Investments in the Inner and Metro-Area and Northwest and Northwest/Central Load Zones*, for Vermont Electric Power Company, Final Report: April 2003 (with John Plunkett et al.)
- *Residential HVAC Quality Installation: New Partnership Opportunities and Approaches*, Proceedings of ACEEE 2002 Summer Study Conference on Energy Efficiency in Buildings, Volume 6 (with Rebecca Foster, Mia South, George Edgar and Put Murphy)
- *A Modified Delphi Approach to Predict Market Transformation Program Effects*, Proceedings of ACEEE 2000 Summer Study Conference on Energy Efficiency in Buildings, Volume 6 (with Phil Mosenthal et al.)
- *Using Targeted Energy Efficiency Programs to Reduce Peak Electrical Demand and Address Electric System Reliability Problems*, published by the American Council for an Energy Efficient Economy, November 2000 (with Steve Nadel and Fred Gordon)
- *Energy Savings Potential from Addressing Residential Air Conditioner and Heat Pump Installation Problems*, American Council for an Energy Efficient Economy, February 1999 (with John Proctor and Steve Nadel)
- *Promoting High Efficiency Residential HVAC Equipment: Lessons Learned from Leading Utility Programs*, Proceedings of ACEEE 1998 Summer Study Conference on Energy Efficiency in Buildings, Volume 2 (with Jane Peters and Denise Rouleau)
- *PowerSaver Home Program Impact Evaluation*, report to Potomac Edison, February 1998 (with Andy Shapiro, Ken Tohinaka and Karl Goetze)
- *A Tale of Two States: Detailed Characterization of Residential New Construction Practices in Vermont and Iowa*, Proceedings of ACEEE 1996 Summer Study Conference on Energy Efficiency in Buildings, Volume 2 (with Blair Hamilton, Paul Erickson, Peter Lind and Todd Presson)
- *New Smart Protocols to Avoid Lost Opportunities and Maximize Impact of Residential Retrofit Programs*, in Proceedings of ACEEE 1994 Summer Study on Energy Efficiency in Buildings (with Blair Hamilton and Ken Tohinaka)
- *Economic Analysis of Woodchip Systems and Finding Capital to Pay for a Woodchip Heating System*, Chapters 6 and 8 in Woodchip Heating Systems: A Guide for Institutional and Commercial Biomass Installations, published by the Council of Northeastern Governors, July 1994

- *PSE&G Lost Opportunities Study: Current Residential Programs and Relationship to Lost Opportunities*, prepared for the PSE&G DSM Collaborative, June 1994 (with Blair Hamilton, Paul Berkowitz and Wayne DeForest)
- *PSE&G Lost Opportunities Study: Preliminary Residential Market Analysis*, prepared for the PSE&G DSM Collaborative, May 1994 (with Blair Hamilton, Paul Berkowitz and Wayne DeForest)
- *Long-Range Evaluation Plan for the Vermont Weatherization Assistance Program*, prepared for the Vermont Office of Economic Opportunity, February 1994 (with Blair Hamilton and Ken Tohinaka)
- *Impact Evaluation of the 1992-1993 Vermont Weatherization Assistance Program*, prepared for the Vermont Office of Economic Opportunity, December 1993 (with Blair Hamilton and Ken Tohinaka)
- *Electric Utilities and Long-Range Transport of Mercury and Other Toxic Air Pollutants*, published by the Center for Clean Air Policy, 1991
- *Coal and Emerging Energy and Environmental Policy*, in Natural Resources and Environment, 1991 (with Don Crane)
- *Acid Rain: The Problem*, in EPA Journal, January/February 1991 (with Ned Helme)
- *An Efficient Approach to Reducing Acid Rain: The Environmental Benefits of Energy Conservation*, published by the Center for Clean Air Policy, 1989
- *The Untold Story: The Silver Lining for West Virginia in Acid Rain Control*, published by the Center for Clean Air Policy, 1988
- *Midwest Coal by Wire: Addressing Regional Energy and Acid Rain Problems*, published by the Center for Clean Air Policy, 1987
- *Acid Rain: Road to a Middle Ground Solution*, published by the Center for Clean Air Policy, 1987 (with Ned Helme)

EFG Experience with Energy Transition Issues

Decarbonization Pathways Studies

- EFG has led or played major roles in the conduct of several decarbonization studies
 - **Massachusetts 2050 Decarbonization Roadmap.** EFG was part of the Cadmus team that analyzed economy-wide decarbonization pathways for the state's Executive Office of Energy and Environmental Affairs.
 - **Vermont Pathways Analysis Report.** EFG was part of Cadmus team that analyzed economy-wide decarbonization pathways for the Vermont Agency of Natural Resources and the Vermont Climate Council. EFG led the buildings/thermal sector work.
 - **Vermont Thermal Sector Decarbonization Analysis.** EFG is currently under contract to the Vermont Agency of Natural Resources to assess the emission reduction, cost, and other trade-offs between different policy approaches to decarbonizing buildings and industry in the state.
 - **Delaware Comprehensive Energy Plan.** EFG is currently leading analysis of decarbonization pathways for the Delaware Department of Natural Resources and Environmental Control.
- EFG has helped clients critically review decarbonization studies performed by other parties, particularly those sponsored by gas utilities.
 - **Massachusetts Gas Utilities Study:** EFG helped Sierra Club participate in a year-long utility-stakeholder collaborative process for assessing and modeling options for decarbonization. This included drafting numerous comments on the utilities' consultants' proposed analysis scenarios, draft modeling assumptions, and draft reports. EFG has also supported drafting of comments to regulators critiquing the gas utilities' study and policy/planning proposals in subsequent regulatory proceeding.
 - **Assessment of Common Biases in Gas Utility Decarbonization Studies.** EFG helped the Natural Resources Defense Council review and critique numerous gas industry-funded decarbonization studies across a range of different U.S. states.

Renewable Gas Potential

- EFG recently was part of a consultant team that critiqued a Michigan RNG potential study on behalf of the Natural Resources Defense Council.

Building Decarbonization Policy and Economics

- **Vermont Clean Heat Standard.** EFG Principal Chris Neme was one of two authors of the Vermont Energy Action Network's 2021 white paper on the concept of a Clean Heat Standard, which was born out of a nearly year-long multi-stakeholder working group that Chris also co-led (and included the CEO of Vermont Gas). The concept was subsequently turned in to legislation, passed out of both the Vermont House and Vermont Senate, and came within on vote of overriding the Governor's veto. The legislation was recently reintroduced in the current legislative session, with several modifications on which Mr. Neme provided input, as Vermont Senate Bill 5.
- **Other Vermont climate policy whitepapers.** EFG co-led the development of a "Weatherization at Scale" proposal which followed a year of work by a multi-stakeholder working group which EFG Principal Richard Faesy co-led with the CEO of Vermont Gas. We also drafted a whitepaper

for the Vermont Energy Action Network on the concept of a heating and water heating equipment “fee-bate” (sliding scale sales tax based on carbon emissions intensity).

- **Michigan Healthy Climate Plan.** EFG Principal Chris Neme represented the Natural Resources Defense Council (NRDC) in a couple of working groups organized by the state’s Department of Environment, Great Lakes and Energy to develop a state climate plan.
- **Illinois Climate Legislation.** EFG has supported NRDC in developing legislative policy proposals for advancing decarbonization in the state.
- **Customer Economics of Electrification in Chicago.** EFG published a report in November 2022 analyzing the economics and greenhouse gas emission impacts of residential electrification in the city of Chicago. The analysis was based on current and forecast future retail energy prices for gas and electricity; capital costs of heat pumps, heat pump water heaters and other electric and gas appliances; current average gas consumption by end use; performance of high efficiency gas and electric equipment; and various other factors.

Regulatory Testimony

- **White Paper on shorter-term Depreciation of new gas infrastructure investments (Rhode Island).** EFG drafted a white paper which the Conservation Law Foundation filed with the Rhode Island Public Utilities Commission on the merits of shorter-term (e.g. 20 years) amortization of new gas utility investments to reduce risk of stranded assets in the context of evolving climate policies.
- **Nicor Gas RNG Pilots (Illinois).** EFG filed testimony on behalf of the Environmental Defense Fund in opposition to proposed RNG pilot projects.
- **Northwest gas pipeline (FERC).** EFG drafted a report filed with the U.S. Federal Energy Regulatory Commission, on behalf of the Washington state Attorney General, on the lack of demonstrated need for and adverse environmental consequences of a proposed expansion of an interstate gas pipeline by Gas Transition Northwest (GTN).
- **Northwest Natural Gas hydrogen blending pilot (Oregon).** EFG was recently hired to draft testimony for Sierra Club and other parties to critique a proposed hydrogen blending pilot. Testimony to be filed in December 2022.
- **Illinois and Michigan electrification programs.** EFG has supported – in testimony and then from a technical and programmatic perspective – the development of residential electrification programs. The initial programs were launched through energy efficiency program portfolios. More recently, EFG has filed testimony in electric utility rate cases in Michigan to propose electrification pilots funded through electric rates. The testimony analyzed the customer economics and electric rate impacts of such programs.
- **Fortis BC RNG purchases to offset emissions from new construction of gas heated homes.** EFG was hired by the BC Sustainable Energy Association to critique a recent Fortis proposal to meet provincial requirements for net zero emission new construction by contracting for the amount of RNG any new gas homes would consume and socializing the cost of such purchases across all gas customers. As part of its critique, EFG analyzed the relative customer economics of gas consumption under the proposal to the alternative of efficient all-electric new homes.

David Gard

CASE EB-2022-0200: Rates: Distribution: Enbridge Gas Inc.	COST CLAIM EB-2022-0200 : 1 : David Poch	INTERVENOR NAME Poch, David; +1 (613) 264-0055 dpoch@eelaw.ca	PARTICIPANT CLAIM STATUS Submitted
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FILING PARTICIPANT	NEW PARTICIPANT Yes	NON-FILING PARTICIPANT F. NAME David	NON-FILING PARTICIPANT L. NAME Gard
SERVICE PROVIDER TYPE* Consultant	YEAR CALLED TO BAR*	COMPLETED YEARS PRACTICING/YEARS OF RELEVANT EXPERIENCE* 21	HOURLY RATE 290
HST RATE CHARGED* 0.00	CV STATUS (FOR CONSULTANT/ANALYST) CV Attached	LAST CV DATE July 06, 2023	OVERRIDE HOURLY RATE Yes
HST NUMBER	HEARINGS Yes	CONSULTATIONS No	DISBURSEMENTS Yes

HEARINGS

Hearings Hours 11.00	Hearings Subtotal (\$) 3,190.00	Hearings Total Tax (\$) 0.00	Hearings Total (\$) 3,190.00
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<u>Name</u>	<u>Hours</u>	<u>Hourly Rate</u>	<u>Sub Total</u>	<u>HST Rate</u>	<u>HST</u>	<u>Total</u>
REVIEW APPLICATION AND EVIDENCE						
Review Application and Evidence		290		0.00		
DISCOVERY						
Preparation of Interrogatories		290		0.00		
Review Interrogatory Responses		290		0.00		
Technical Conference Preparation		290		0.00		
Technical Conference Attendance		290		0.00		
Technical Conference Follow Up		290		0.00		
ISSUES LIST						
Preparation		290		0.00		
Attendance at Issues Conference		290		0.00		
INTERVENOR EVIDENCE						
Preparation	11.00	290	3,190.00	0.00		3,190.00
Interrogatory Responses		290		0.00		
Preparation of Witness(es) for Attendance at Hearing		290		0.00		
SETTELEMENT CONFERENCE / ADR						
Preparation		290		0.00		
Attendance		290		0.00		

<u>Name</u>	<u>Hours</u>	<u>Hourly Rate</u>	<u>Sub Total</u>	<u>HST Rate</u>	<u>HST</u>	<u>Total</u>
Preparation of Settlement Proposal		290		0.00		
Attendance at Presentation to Panel		290		0.00		
ORAL HEARING						
Preparation		290		0.00		
Attendance at Oral Hearing		290		0.00		
SUBMISSIONS						
Written Submissions		290		0.00		
Oral Submissions		290		0.00		
Attendance at Oral Submissions		290		0.00		
OTHER ATTENDANCE						
Other Attendance		290		0.00		
COMMUNICATION						
With Client		290		0.00		
With Other Parties		290		0.00		
MOTIONS						
Preparation of Motion(s) Materials		290		0.00		
Prepare Submissions on the Motion(s)		290		0.00		
Attendance at Hearing on Motion(s)		290		0.00		
CONFIDENTIALITY						
Preparation of Application for Confidentiality		290		0.00		
Prepare Submissions on Confidentiality		290		0.00		
Attendance at Hearing on Confidentiality		290		0.00		
DECISION						
Review		290		0.00		
RATE ORDER						
Review		290		0.00		
Prepare Submission on Rate Order		290		0.00		
TOTAL SERVICE PROVIDER FEES						
Total Service Provider Fees:	11.00		3,190.00		0.00	3,190.00

Attachments

<u>Attachment</u>	<u>Document Type</u>	<u>Import Message</u>
Job 1044 June 2023.pdf	Time Docket and Invoice	
5 Lakes Energy_detailed invoice hours March-May 2023 (002).pdf	Time Docket	
Resume_David Gard_April 2023.pdf	CV	

DISBURSEMENTS

Disbursement Subtotal(\$)	Disbursement Total Tax(\$)	Other Taxes/Tips Total(\$)	Disbursement Total(\$)
0.00	0.00	0.00	0.00

<u>Name</u>	<u>ATT.</u> <u>REQ'D</u>	<u>ATT.</u> <u>PROV</u>	<u>Qty</u>	<u>\$/</u> <u>Unit</u>	<u>Net</u> <u>Cost</u>	<u>HST</u> <u>Rate</u>	<u>HST</u>	<u>Other</u> <u>Taxes/Tip</u>	<u>Total</u>	<u>Rationale/</u> <u>Comment</u>
Scanning/Photocopy (Internal)						0.00				
Scanning/Photocopy (External)						0.00				
Printing (Internal)						0.00				
Printing (External)						0.00				
Courier						0.00				
Teleconference						0.00				
Travel: Air						0.00				
Travel: Car Rental						0.00				
Travel: Gas						0.00				
Travel: Car Mileage – Southern Ontario				0.40						
Travel: Car Mileage – Northern Ontario				0.41						
Travel: Rail						0.00				
Travel (Other)						0.00				
Parking						0.00				
Taxi						0.00				
Accommodation						0.00				
Other						0.00				

Hearings, Consultations, Disbursements Attachments

<u>Attachment</u>	<u>Document Type</u>	<u>Claim Type</u>	<u>Import Message</u>
Job 1044 June 2023.pdf	Time Docket and Invoice	Hearings	
5 Lakes Energy_detailed invoice hours March-May 2023 (002).pdf	Time Docket	Hearings	
Resume_David Gard_April 2023.pdf	CV	Hearings	

Invoice #: 465

Send Payment To:
5 Lakes Energy
PO Box 869
Northport, MI 49670
5173377527

Invoice For:
Energy Futures Group
Attn: Chris Neme

Description	Unit Cost	Quantity	Price
03/18/2023 - [Enbridge Ontario], David Gard, Download and organize ResStock data for Grand Traverse County to be used as proxy for Toronto	\$ 290.00	1.000	\$ 290.00
03/29/2023 - [Enbridge Ontario], David Gard, Participate in two phone calls with Chris Neme; conduct weather data comparison of Traverse City and Toronto using weatherspark website; preliminary steps for updating heat pump model.	\$ 290.00	2.000	\$ 580.00
03/30/2023 - [Enbridge Ontario], David Gard, Conduct comparison of amy_2018 and tmy3 weather data; import Grand Traverse County ResStock data into heat pump model and continue model update	\$ 290.00	6.000	\$ 1,740.00
03/31/2023 - [Enbridge Ontario], David Gard, Finalize model update including revisions to NPV tables; meet with Chris Neme to review latest version	\$ 290.00	2.000	\$ 580.00
Grand Total:			\$ 3,190.00

Energy Futures Group, Inc.

PO Box 587
Hinesburg, VT 05461
Phone: (802) 482-5001
Fax: (802) 329-2143



Invoice

TO: Green Energy Coalition
David Poch
1649 Old Brooke Road
Maberly, ON K0H 2B0
(613) 264-0055
dpoch@eelaw.ca

Invoice #: 5851
Job Name: Enbridge 2023 Rebasing Application
Project Manager: Chris Neme
Invoice Date: 7/6/2023
Invoice Period: 6/1/2023-6/30/2023
Terms: Net 30 Days

Consultant Labor	Job-Phase	Phase Description	Project	Project Description	Rate	Hours	Amount
Chris Neme	1044-06	Oral Hearing	01	Preparation	\$330.00	0.50	\$165.00
EFG Labor Subtotal:						0.50	\$165.00

Subcontractor	Job-Phase-Project	Project Description	Amount
5 Lakes Energy, LLC	1044-04-01	Preparation	\$3,190.00
Subcontractor Subtotal:			\$3,190.00

TOTAL DUE THIS INVOICE:	\$3,355.00 CAD
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Energy Futures Group, Inc.

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Fax: (802) 329-2143



Task Description

Invoice #:5851

Job Name: Enbridge 2023 Rebasing Application

Job Code: 1044

Invoice Period: 6/1/2023-6/30/2023

Consultant: Chris Neme

Date	Phase-Project	Project Description	Hours	Task Description
6/23/2023	06-01	Preparation	0.50	assist D.Poch with prep for hearing cross
TOTAL:			0.50	

DAVID L. GARD

810 Knoll Rd., East Lansing, MI 48823 | 517-896-2960 | gardd@umich.edu

SUMMARY

Professional experience includes directing a statewide nonprofit organization's energy program for more than a decade prior to current role as senior consultant with a private energy policy firm since 2014.

EXPERIENCE

- | | |
|--------------|--|
| 2014-Present | <p>Senior Consultant, East Lansing, MI, <i>5 Lakes Energy</i></p> <ul style="list-style-type: none">• Conducts modeling and analysis on the interplay between building electrification, energy efficiency, and different electricity tariff designs;• Intervenes in utility regulatory cases focusing mainly on the impact of energy efficiency and demand response programming on residential customers and offering suggestions for their improvement;• Serves as Executive Director of the Michigan Energy Efficiency Contractors Association (MEECA) trade group. |
| 2013-2014 | <p>Executive Director, Oberlin, OH, <i>The Oberlin Project</i></p> <ul style="list-style-type: none">• Led a community-based effort to reduce carbon emissions and build local resilience; reported to Oberlin City Manager and Oberlin College President;• Developed strategies to strengthen the regional food economy and provide affordable, efficient housing for area residents. |
| 2002-2013 | <p>Energy Program Director, Lansing, MI, <i>Michigan Environmental Council</i></p> <ul style="list-style-type: none">• Led a statewide nonprofit organization's work to achieve a Renewable Energy Standard and other clean energy policies in Michigan;• Managed coalitions of stakeholders representing a range of interests;• Educated policymakers, regulators, and other officials about energy issues. |
| 1995-1998 | <p>Senior Design Engineer, Grand Rapids, MI, <i>Dematic</i></p> <ul style="list-style-type: none">• Directed the design, procurement, and commissioning of material handling systems for various applications in the logistics industry;• Selected to serve on the team which achieved initial ISO 9001 certification. |
| 1991-1995 | <p>Division Officer (O-3), USS Mount Whitney, Norfolk, VA, <i>U.S. Navy</i></p> <ul style="list-style-type: none">• Led Boiler and Main Engine Divisions within the Engineering Department;• Oversaw extensive equipment maintenance plan; managed and trained 45 engineering technicians;• Qualified as Officer of the Deck (Underway) of a 20,000-ton warship. |

EDUCATION

- 1998-2001 **MBA**, Ann Arbor, MI, *University of Michigan Ross School of Business*
- Completed the Erb Institute dual degree program;
 - Selected as a fellow of the Tauber Institute for Global Operations (joint with College of Engineering) to study lean manufacturing and supply chain
 - Completed a two-term course in entrepreneurial studies;
 - As summer intern at Steelcase, managed lean process improvement of an industrial stamping operation.
- 1998-2001 **MS**, Ann Arbor, MI, *University of Michigan School for Environment and Sustainability*
- Secured \$25,000 grant to conduct life cycle assessment for master's thesis;
 - Awarded 3M Prize for Outstanding Achievement in Industrial Ecology;
 - As summer intern at Cummins Engine Company, developed environmental policy and supported the creation of a diesel industry advocacy campaign.
- 1987-1991 **BS in Mechanical Engineering**, Evanston, IL, *Northwestern University*

LEADERSHIP AND SERVICE

- External Advisory Board Member**, Ann Arbor, MI, *University of Michigan Center for Sustainable Systems*
- Advises on strategy for a major academic research and teaching center;
 - Provides input to the University of Michigan's long-term plan to reduce carbon emissions and mitigate climate change.

CASE EB-2022-0200: Rates: Distribution: Enbridge Gas Inc.	COST CLAIM EB-2022-0200 : 1 : David Poch	INTERVENOR NAME Poch, David; +1 (613) 264-0055 dpoch@eelaw.ca	PARTICIPANT CLAIM STATUS Submitted
FILING PARTICIPANT Poch, David; +1 (613) 264-0055 dpoch@eelaw.ca	NEW PARTICIPANT No	NON-FILING PARTICIPANT F. NAME	NON-FILING PARTICIPANT L. NAME
SERVICE PROVIDER TYPE* Legal Counsel	YEAR CALLED TO BAR* 1980	COMPLETED YEARS PRACTICING/YEARS OF RELEVANT EXPERIENCE* 41	HOURLY RATE 330
HST RATE CHARGED* 13.00	CV STATUS (FOR CONSULTANT/ANALYST) CV Required	LAST CV DATE	OVERRIDE HOURLY RATE No
HST NUMBER	HEARINGS Yes	CONSULTATIONS No	DISBURSEMENTS No

HEARINGS

Hearings Hours	Hearings Subtotal (\$)		Hearings Total Tax (\$)		Hearings Total (\$)	
245.60	81,048.00		10,536.27		91,584.27	
<u>Name</u>	<u>Hours</u>	<u>Hourly Rate</u>	<u>Sub Total</u>	<u>HST Rate</u>	<u>HST</u>	<u>Total</u>
REVIEW APPLICATION AND EVIDENCE						
Review Application and Evidence	18.45	330	6,088.50	13.00	791.51	6,880.01
DISCOVERY						
Preparation of Interrogatories	12.70	330	4,191.00	13.00	544.83	4,735.83
Review Interrogatory Responses	15.75	330	5,197.50	13.00	675.68	5,873.18
Technical Conference Preparation	10.00	330	3,300.00	13.00	429.00	3,729.00
Technical Conference Attendance	27.50	330	9,075.00	13.00	1,179.75	10,254.75
Technical Conference Follow Up	1.75	330	577.50	13.00	75.08	652.58
ISSUES LIST						
Preparation	1.70	330	561.00	13.00	72.93	633.93
Attendance at Issues Conference	7.00	330	2,310.00	13.00	300.30	2,610.30
INTERVENOR EVIDENCE						
Preparation	23.75	330	7,837.50	13.00	1,018.88	8,856.38
Interrogatory Responses	4.60	330	1,518.00	13.00	197.34	1,715.34
Preparation of Witness(es) for Attendance at Hearing	0.00	330		13.00		
SETTELEMENT CONFERENCE / ADR						
Preparation	10.60	330	3,498.00	13.00	454.74	3,952.74
Attendance	55.10	330	18,183.00	13.00	2,363.79	20,546.79

<u>Name</u>	<u>Hours</u>	<u>Hourly Rate</u>	<u>Sub Total</u>	<u>HST Rate</u>	<u>HST</u>	<u>Total</u>
Preparation of Settlement Proposal	2.55	330	841.50	13.00	109.40	950.90
Attendance at Presentation to Panel	0.00	330		13.00		
ORAL HEARING						
Preparation	34.60	330	11,418.00	13.00	1,484.34	12,902.34
Attendance at Oral Hearing	0.00	330		13.00		
SUBMISSIONS						
Written Submissions		330		13.00		
Oral Submissions		330		13.00		
Attendance at Oral Submissions		330		13.00		
OTHER ATTENDANCE						
Other Attendance		330		13.00		
COMMUNICATION						
With Client	0.50	330	165.00	13.00	21.45	186.45
With Other Parties	19.05	330	6,286.50	13.00	817.25	7,103.75
MOTIONS						
Preparation of Motion(s) Materials		330		13.00		
Prepare Submissions on the Motion(s)		330		13.00		
Attendance at Hearing on Motion(s)		330		13.00		
CONFIDENTIALITY						
Preparation of Application for Confidentiality		330		13.00		
Prepare Submissions on Confidentiality		330		13.00		
Attendance at Hearing on Confidentiality		330		13.00		
DECISION						
Review		330		13.00		
RATE ORDER						
Review		330		13.00		
Prepare Submission on Rate Order		330		13.00		
TOTAL SERVICE PROVIDER FEES						
Total Service Provider Fees:	245.60		81,048.00		10,536.27	91,584.27

Attachments

<u>Attachment</u>	<u>Document Type</u>	<u>Import Message</u>
Poch interim acctnt..pdf	Invoice	
Poch docket interim.xlsx	Time Docket	

Hearings, Consultations, Disbursements Attachments

<u>Attachment</u>	<u>Document Type</u>	<u>Claim Type</u>	<u>Import Message</u>
Poch interim acctnt..pdf	Invoice	Hearings	
Poch docket interim.xlsx	Time Docket	Hearings	

ACCOUNT

Date: June 29, 2023

To: GEC

Re: EB-2022-0200 EGI Rebasing – Interim Invoice

For services rendered on behalf of GEC in this matter (see dockets attached)

Fees at OEB tariff for purposes of costs request:

Fees 245.6 hrs. @ \$330.00 (see docket)	\$81,048.00
Disbursements (see summary)	\$0
Subtotal	\$81,048.00
HST	\$10,536.27
Total Costs	\$91,584.27

This is my account E&OE



David Poch

HST# 11020 1506

Chelsea Hotaling

CASE EB-2022-0200: Rates: Distribution: Enbridge Gas Inc.	COST CLAIM EB-2022-0200 : 1 : David Poch	INTERVENOR NAME Poch, David; +1 (613) 264-0055 dpoch@eelaw.ca	PARTICIPANT CLAIM STATUS Submitted
FILING PARTICIPANT	NEW PARTICIPANT Yes	NON-FILING PARTICIPANT F. NAME Chelsea	NON-FILING PARTICIPANT L. NAME Hotaling
SERVICE PROVIDER TYPE* Consultant	YEAR CALLED TO BAR*	COMPLETED YEARS PRACTICING/YEARS OF RELEVANT EXPERIENCE* 6	HOURLY RATE 230
HST RATE CHARGED* 0.00	CV STATUS (FOR CONSULTANT/ANALYST) CV Attached	LAST CV DATE July 06, 2023	OVERRIDE HOURLY RATE No
HST NUMBER	HEARINGS Yes	CONSULTATIONS No	DISBURSEMENTS No

HEARINGS

Hearings Hours	Hearings Subtotal (\$)	Hearings Total Tax (\$)	Hearings Total (\$)			
11.75	2,702.50	0.00	2,702.50			
<u>Name</u>	<u>Hours</u>	<u>Hourly Rate</u>	<u>Sub Total</u>	<u>HST Rate</u>	<u>HST</u>	<u>Total</u>
REVIEW APPLICATION AND EVIDENCE						
Review Application and Evidence		230		0.00		
DISCOVERY						
Preparation of Interrogatories		230		0.00		
Review Interrogatory Responses		230		0.00		
Technical Conference Preparation		230		0.00		
Technical Conference Attendance		230		0.00		
Technical Conference Follow Up		230		0.00		
ISSUES LIST						
Preparation		230		0.00		
Attendance at Issues Conference		230		0.00		
INTERVENOR EVIDENCE						
Preparation	11.75	230	2,702.50	0.00		2,702.50
Interrogatory Responses		230		0.00		
Preparation of Witness(es) for Attendance at Hearing		230		0.00		
SETTELEMENT CONFERENCE / ADR						
Preparation		230		0.00		
Attendance		230		0.00		

<u>Name</u>	<u>Hours</u>	<u>Hourly Rate</u>	<u>Sub Total</u>	<u>HST Rate</u>	<u>HST</u>	<u>Total</u>
Preparation of Settlement Proposal		230		0.00		
Attendance at Presentation to Panel		230		0.00		
ORAL HEARING						
Preparation		230		0.00		
Attendance at Oral Hearing		230		0.00		
SUBMISSIONS						
Written Submissions		230		0.00		
Oral Submissions		230		0.00		
Attendance at Oral Submissions		230		0.00		
OTHER ATTENDANCE						
Other Attendance		230		0.00		
COMMUNICATION						
With Client		230		0.00		
With Other Parties		230		0.00		
MOTIONS						
Preparation of Motion(s) Materials		230		0.00		
Prepare Submissions on the Motion(s)		230		0.00		
Attendance at Hearing on Motion(s)		230		0.00		
CONFIDENTIALITY						
Preparation of Application for Confidentiality		230		0.00		
Prepare Submissions on Confidentiality		230		0.00		
Attendance at Hearing on Confidentiality		230		0.00		
DECISION						
Review		230		0.00		
RATE ORDER						
Review		230		0.00		
Prepare Submission on Rate Order		230		0.00		
TOTAL SERVICE PROVIDER FEES						
Total Service Provider Fees:	11.75		2,702.50	0.00		2,702.50

Attachments

<u>Attachment</u>	<u>Document Type</u>	<u>Import Message</u>
Job 1044 March 2023.pdf	Time Docket and Invoice	
Hotaling Resume.pdf	CV	

Hearings, Consultations, Disbursements Attachments

<u>Attachment</u>	<u>Document Type</u>	<u>Claim Type</u>	<u>Import Message</u>
Job 1044 March 2023.pdf	Time Docket and Invoice	Hearings	
Hotaling Resume.pdf	CV	Hearings	

Energy Futures Group, Inc.

PO Box 587
Hinesburg, VT 05461
Phone: (802) 482-5001
Fax: (802) 329-2143



Invoice

TO: Green Energy Coalition
David Poch
1649 Old Brooke Road
Maberly, ON K0H 2B0
(613) 264-0055
dpoch@eelaw.ca

Invoice #: 5850
Job Name: Enbridge 2023 Rebasing Application
Project Manager: Chris Neme
Invoice Date: 7/6/2023
Invoice Period: 3/1/2023-3/31/2023
Terms: Net 30 Days

Consultant Labor	Job-Phase	Phase Description	Project	Project Description	Rate	Hours	Amount
Chris Neme	1044-02	Discovery	02	Review Interrogatory Responses	\$330.00	13.50	\$4,455.00
Chris Neme	1044-02	Discovery	03	Technical Conferences Preparation	\$330.00	17.25	\$5,692.50
Chris Neme	1044-02	Discovery	04	Technical Conference Attendance	\$330.00	11.75	\$3,877.50
Chelsea Hotaling	1044-04	Intervenor Evidence	01	Preparation	\$230.00	11.75	\$2,702.50
Chris Neme	1044-04	Intervenor Evidence	01	Preparation	\$330.00	28.75	\$9,487.50
EFG Labor Subtotal:						83.00	\$26,215.00

TOTAL DUE THIS INVOICE:	\$26,215.00 CAD
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Energy Futures Group, Inc.

PO Box 587
Hinesburg, VT 05461
Phone: (802) 482-5001
Fax: (802) 329-2143



Task Description

Invoice #:5850
Job Name: Enbridge 2023 Rebasing Application
Job Code: 1044
Invoice Period: 3/1/2023-3/31/2023
Consultant: Chelsea Hotaling

Date	Phase-Project	Project Description	Hours	Task Description
3/12/2023	04-01	Preparation	3.25	Researching examples of accelerated depreciation and hydrogen in residential homes
3/13/2023	04-01	Preparation	3.50	Hydrogen research
3/14/2023	04-01	Preparation	4.25	Call with Chris; Emails to contacts about examples; Research in MA and NY on accelerated depreciation examples
3/17/2023	04-01	Preparation	0.75	Reorganizing hydrogen notes for Chris; Call with Richard from RAP about hydrogen ready appliances
TOTAL:			11.75	

Energy Futures Group, Inc.

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Fax: (802) 329-2143



Task Description

Invoice #:5850
Job Name: Enbridge 2023 Rebasing Application
Job Code: 1044
Invoice Period: 3/1/2023-3/31/2023
Consultant: Chris Neme

Date	Phase-Project	Project Description	Hours	Task Description
3/13/2023	02-02	Review Interrogatory Responses	3.50	Review Enbridge IR responses
3/14/2023	02-02	Review Interrogatory Responses	5.00	Review Enbridge IR responses
3/15/2023	02-02	Review Interrogatory Responses	2.00	review and analyze IR responses
3/16/2023	02-02	Review Interrogatory Responses	3.00	review and analyze IR responses
TOTAL:			13.50	
3/14/2023	02-03	Technical Conferences Preparation	1.25	Tech conf. prep; call w/GEC, ED
3/17/2023	02-03	Technical Conferences Preparation	3.00	draft tech conf questions
3/19/2023	02-03	Technical Conferences Preparation	1.00	work on Tech Conf questions; send NDA for Guidehouse model
3/20/2023	02-03	Technical Conferences Preparation	7.00	draft Q's for Tech conf
3/21/2023	02-03	Technical Conferences Preparation	2.00	prep for and participate in mtg w/Guidehouse on decarb model
3/22/2023	02-03	Technical Conferences Preparation	3.00	prep Q's for tech conference panel 2
TOTAL:			17.25	
3/22/2023	02-04	Technical Conference Attendance	4.75	attend tech conference, ask Q's on behalf of GEC
3/23/2023	02-04	Technical Conference Attendance	7.00	attend tech conference, ask Q's on behalf of GEC
TOTAL:			11.75	
3/15/2023	04-01	Preparation	0.50	research on hydrogen applications in buildings
3/17/2023	04-01	Preparation	1.50	research on hydrogen applications in buildings
3/24/2023	04-01	Preparation	3.00	analysis of electrification load shapes, economics
3/27/2023	04-01	Preparation	5.50	work on testimony
3/28/2023	04-01	Preparation	6.00	work on testimony

3/29/2023	04-01	Preparation	5.50 work on testimony
3/30/2023	04-01	Preparation	3.25 work on testimony outline
3/31/2023	04-01	Preparation	3.50 work on evidence outline
TOTAL:			28.75

Professional Summary

Chelsea is a Consultant at Energy Futures Group specializing in integrated resource planning and load forecasting. Prior to joining EFG, Chelsea held a research position at Clarkson University while completing her Master's in Data Analytics and Environmental Policy & Governance. Chelsea's research focused on multi-stakeholder microgrids for resiliency. She also participated in the Reforming the Energy Vision (REV) proceedings for the Potsdam (NY) microgrid REV project. Chelsea's current work is focused on all aspects of Integrated Resource Planning including capacity expansion and production cost modeling and load forecasting. Chelsea runs the EnCompass model in support of long-term planning exercises such as IRP analyses and has critiqued IRP modeling performed using Aurora, Plexos, PowerSimm, and System Optimizer. Chelsea has experience working with numerous software programs including Python, R, and Stata.

Education

M.S., Data Analytics, Clarkson University, 2020

M.S., Environmental Policy and Governance, Clarkson University, 2019

MBA, Concentration in Environmental Management, Clarkson University, 2012

B.S., Accounting and Economics, Elmira College, 2007

Experience

2021-present: Consultant, Energy Futures Group, Hinesburg, VT

2020-2021: Senior Analyst, Energy Futures Group, Hinesburg, VT

2019-2020: Analyst, Energy Futures Group, Hinesburg, VT

2018-2019: Intern, Sommer Energy, Canton, NY

2016-2019: Research Assistant (electric microgrid pilot project), Clarkson University, Potsdam, NY

Selected Projects

- **GridLab.** Performing capacity expansion and production cost modeling within EnCompass to identify resource mixes to achieve 100% emissions-free electricity by 2035 for the Public Service Company of New Mexico's electric system. (2022 to present)
- **Sierra Club.** Performing capacity expansion and production cost modeling within EnCompass to evaluate retirement and replacement of MidAmerican's coal plants (2022 to present)

- [Kentuckians for the Commonwealth, Kentucky Solar Energy Society, and Mountain Association](#). Reviewed and provided comments on East Kentucky Power Cooperative's 2022 Integrated Resource Plan. (2022)
- [Kentuckians for the Commonwealth, Kentucky Solar Energy Society, Metropolitan Housing Coalition, and Mountain Association](#). Reviewed and provided comments on Louisville Gas & Electric and Kentucky Utilities' 2021 Integrated Resource Plan. (2022)
- [The Department of Attorney General and Sierra Club](#). Reviewed and submitted testimony on the Aurora modeling Indiana Michigan Power Company performed for its 2021 IRP. (2022)
- [The Environmental Law and Policy Center, The Ecology Center, Union of Concerned Scientists, and Vote Solar](#). Performed Aurora modeling to evaluate higher levels of distributed solar for the Consumers Energy Company's 2021 Integrated Resource Plan. (2020 to 2021)
- [Colorado Office of the Utility Consumer Advocate](#). Performed EnCompass modeling related to the Public Service Company of Colorado's 2021 Electric Resource Plan. (2021)
- [Minnesota Center for Environmental Advocacy](#). Evaluation of Otter Tail Power's 2021 Integrated Resource Plan and EnCompass modeling in support of that evaluation. (2022 to present) Evaluation of Minnesota Power's 2021 Integrated Resource Plan and EnCompass modeling in support of that evaluation. (2021 to present) Evaluation of Xcel Energy's 2020 Integrated Resource Plan and EnCompass modeling in support of that evaluation. (2019 to 2021)
- [Earthjustice](#). Evaluation of Louisville Gas and Electric Company and Kentucky Utilities Company Integrated Resource Plan. (2022 to present) Evaluation of PREPA's request for proposals for temporary emergency generation. (May 2020) Evaluation of the Puerto Rico Electric Power Authority's 2019 Integrated Resource Plan. (2019 to 2020)
- [The Council for the New Energy Economics](#). Participated in Evergy's integrated resource plan stakeholder workshops and performed EnCompass modeling to evaluate coal plant retirements (2020 to 2021).
- [EfficiencyOne](#). Supported EfficiencyOne's participation in Nova Scotia Power's integrated resource planning process. (2019 to 2020)
- [Southern Alliance for Clean Energy](#). Evaluation of Dominion Energy South Carolina's 2020 Integrated Resource Plan. (2020)
- [Washington Electric Cooperative](#). Conducted the analysis for the 2020 Integrated Resource Plan. (2019 to 2020)
- [Coalition for Clean Affordable Energy](#). Evaluated the Public Service Company of New Mexico's abandonment and replacement of the San Juan generating station and performed EnCompass modeling to develop an alternative replacement portfolio. (2019 to 2020)
- [Citizens Action Coalition of Indiana](#). Comments regarding Duke Energy Indiana's integrated resource plans to meet future energy and capacity needs (May 2022). Comments regarding Northern Indiana Public Service Company's integrated resource plans to meet future energy and capacity needs. (March 2022) Comments regarding Southern Indiana Gas and Electric's integrated resource plans to meet future energy and capacity needs (November 2020). Comments regarding Indianapolis Power and Light's integrated resource plans to meet future energy and capacity needs

(April 2020). Comments regarding Indiana Michigan Power Company's integrated resource plans to meet future energy and capacity needs (December 2019).

- [Institute for Energy Economics and Financial Analysis \(IEEFA\)](#). Evaluation of National Grid's long-term natural gas capacity report. (March 2020) Evaluation of the Puerto Rico Energy Commission's proposed wheeling regulation. (March 2019) Co-author for the report Retail Choice Will Not Bring Down Puerto Rico's High Electricity Rates. (August 2018) Evaluation of the Puerto Rico Energy Commission's proposed microgrid rules. (February 2018)

Publications

Hotaling, C., Bird, S., & Heintzelman, M. D. (2021). Willingness to pay for microgrids to enhance community resilience. *Energy Policy*, 154, 112248.

Atems, B., & Hotaling, C. (2018). The effect of renewable and nonrenewable electricity generation on economic growth. *Energy Policy*, 112, 111-118.

Bird, S., & Hotaling, C. (2017). Multi-stakeholder microgrids for resilience and sustainability. *Environmental Hazards*, 16(2), 116-132.

Bird, S., Enayati, A., Hotaling, C., and Ortmeyer, T. (2017). Resilient Community Microgrids: Governance and Operational Challenges. In *Energy Internet: An Open Energy Platform to Transform Legacy Power Systems into Open Innovation and Global Economic Engine*, edited by Alex Q. Huang and Wencong Su. Elsevier.