

Chris Fullarton First Wind Energy, LLC via e-mail: cfullarton@firstwind.com

April 10, 2013

Subject: Blue Sky West, LLC and Blue Sky West II, LLC (Bingham Wind Project) Decommissioning Budget

Dear Chris:

Sewall was requested to develop this Decommissioning Budget for the 62 wind turbine generator (WTG) Bingham Wind Project located in the towns of Bingham, Moscow, Parkman, Abbot, Mayfield TWP, and Kingsbury PLT in Somerset and Piscataquis Counties, Maine. The budget represents an opinion of probable cost (OPC), in today's dollars, for decommissioning based on the assumption that the wind turbines, and other project components will be disassembled and disposed following completion of use. The budget is also built on the assumption that the cost of decommissioning will be fully or partially offset by the scrap value of the towers and turbine components.

Based on information provided from First Wind, we are assuming the O&M Building will be turned over to the land owner. This component has therefore not been included in the discussion or calculations herein. It is assumed that all project roads will remain.

## Information Sources for this Review

This review is based on the civil and electrical site plans and quantity information provided by First Wind, discussions with contractors familiar with this type of construction and our own experience with wind projects. Wage rates used in these estimates are based on the State of Maine Department of Labor, Bureau of Labor Standards; 2013 Fair Minimum Wage Rates, Heavy and Bridge; Somerset County.

## **Decommissioning Scope**

The decommissioning process reflected in this OPC is based on Decommissioning Plans prepared for similar wind projects.

In summary, the decommissioning and restoration process in the Plan consists of the following steps:

- · Disassembly and removal of above-ground structures
- · Removal of below-ground structures to a depth of 24 inches
- Re-grading and seeding

Above-ground structures include the turbines, transformers, substation, Dynamic Reactive Device, overhead collection and generator-lead lines, and meteorological towers. Below-ground structures include turbine and collection system foundations; and drainage control structures (e.g., culverts) as necessary to restore turbine sites. Following removal of all above- and below-ground structures to 24 inches below grade, the individual disturbed areas will be re-graded to be consistent with surrounding areas and reseeded to promote re-vegetation. The cost for disposal for any materials that are not scrapped is considered incidental, unless otherwise noted.



# **Decommissioning Budget**

The decommissioning process has been divided into eight (8) general work items. Quantities and unit prices for these individual work items are presented and discussed in detail in the following paragraphs.

- 1. Project Management (contractor costs, equipment, etc.)
- 2. Site Work/Civil (site reclamation)
- 3. Wind Turbine Foundations
- 4. Wind Turbine Generators and MET Towers
- 5. Electrical Collection System
- 6. Electrical Substation
- 7. Electrical GenLead
- 8. Dynamic Reactive Device Facility

#### 1. Project Management

1.1 Mobilization

Total	opinion of probable costs for Project Management:			\$	1,707,600.00	
	1.4 <u>Contingency</u> . A contingency of approximately 10% of the decommissioning scope is recommended to cover unknowns:					
th	1.3 <u>Incidentals / Erosion and Sedimentation Control Measures</u> . A budget of approximately 5% of the decommissioning scope is recommended for project incidentals, including erosion and sedimentation control measures:					
1.2 <u>Pr</u>	1.2 Project Oversight. Oversight of the decommissioning is estimated at:					
То	otal estimate for mobilization is:			\$	420,000.00	
C.	Mobilization and demobilization of ancillary equipment (i.e. bull dozers, backhoes, etc.) is estimated to be:	\$	50,000.00			
В.	In addition, it is estimated that the cranes will be re-mobilized an additional three (3) times at an estimated cost of \$60,000 per move to reach all of the turbine sites for a total of:	\$	180,000.00			
А.	Mobilization and demobilization to setup and breakdown the crane and assist crane estimated to cost a flat fee of \$95,000 per one-way trip, for a total of:	\$	190,000.00			

## 2. Site Work/Civil (Site Reclamation)

- 2.1 <u>Re-grading of turbine sites.</u>
  - A. The decommissioning plan includes restoring each of the turbine sites. We are assuming that all excavated areas will be brought up to grade and sloped to drain with suitable fill material generated from the re-grading of the turbine site or from off-site sources. The estimated cost includes additional fill, topsoil or other organic matter to support growth, seed, and mulch.

Approximate disturbed area:	12,350	SF/turb	oine site	
Estimated cost per 1000 SF (1 MSF):	\$	330.00	/MSF	
Total estimated re-grading material cost for	or all 62 turbine	sites:	\$	252,700.00

B. This re-grading and restoration work is estimated to take a dozer and operator approximately eight (8) hours to complete at each turbine site.

Labor & equipment rate:	\$	200.00	/hour	
Total re-grading and restoration work for	all 62 turbine sites	:	\$	99,200.00



Total estimate for re-grading turbine sites is:	\$ 351,900.00
2.2 <u>Road Maintenance</u> . Dust control, road maintenance, and post construction road repairs is difficult to estimate. A budget of approximately 1% of the \$10 million estimated for road construction is recommended to address these items.	
	\$ 100,000.00
The total opinion of probable costs for Site Work/Civil:	\$ 451,900.00

## 3. Wind Turbine Foundations

3.1 <u>Removal of WTG foundation to 2 FT below grade</u>. Removal of the turbine foundations is assumed to require a hydraulic excavator equipped with hydraulic ram (hoe-ram), an additional excavator with bucket for loading, and various dozers and loaders.

Total estimated labor & equipment cost:	\$	5,500.00 /site	
Total estimate for WTG foundation removal la	bor for all 6	2 turbine sites:	\$ 341,000.00

3.2 <u>Transportation of rubble and disposal</u>. Concrete demolition rubble generated at each turbine site is estimated to be approximately 55 cubic yards (based on a removal depth of 2 feet below grade). As it is assumed the steel rebar will be separated from the concrete debris, the rubble essentially becomes an inert material. Therefore, we have assumed that the concrete rubble generated will not be transported offsite but be used onsite as fill at toes of slopes, for road base or topping material, or at other locations in need of fill as desired by the property owner. Costs to transport the foundation rubble within the project boundaries, in comparison to other decommissioning costs, are assumed to be negligible. In the unlikely event the material cannot be used on-site, the material will be transported for offsite use. Costs to transport the foundation rubble to disposal are based on an estimated requirement of six (6) dump truck trips for each turbine site and transported to a location within 2 hours (one-way) at an equipment and labor rate of \$100/hr.

Total estimated labor & equipment cost:	\$	400.00 /dump truck trip	
Total estimate for WTG foundation transportation	ion costs f	or all 62 turbine sites:	\$ 148,800.00
The total opinion of probable costs for removal of V	WTG Fou	ndations:	\$ 489,800.00

#### 4. Wind Turbine Generators and MET Towers

4.1 Disassembly of turbine generators:

A. Disassembly costs for the WTGs are based on the assumption that it will take a 10-man crew 20 hours to disassemble each tower and turbine, which is roughly equivalent to the labor effort required for tower and turbine assembly.

Estimated labor rate:	\$	25.00	/man-h	our
Total estimate for WTG disassembly for al	l 62 turbines:		\$	310,000.00

B. Based on an assumption that the two cranes (erector and assist cranes) can disassembly two (2) turbines a week, the crane rental is estimated to be 31 weeks. Two (2) weeks are added for wind day delays.

Estimated rental costs for two cranes:	\$	40,000.00	/week	
Total estimate for WTG disassembly equip:	ment for all	62 turbines:		
			\$	1,320,000.00

C. Additionally, once the towers and turbines are on the ground, they will need to be cut up into manageable sized pieces in preparation for transportation to scrap, recycle, or disposal facilities. We are assuming it will take a 5-man crew 20 hours to do this work per turbine.

\$ Estimated labor rate: 15.00 /man-hour



Total estimate for WTG dismantling for all 62 turbines:		\$	93,000.00		
The total estimate for WTG disassembly is:				\$	1,723,000.0
2 Transportation of turbine components to disposal/reclamation					
components to facilities for scrap, recycling or disposal are bas			·		
vehicles per turbine site (note: transport of new turbine and to	wer compo	nents to	a site requires	s 12 t	o 14 transpor
vehicles).					
Total estimated labor & equipment cost: \$	1,400.00	/transp	ort trip		
Total estimate for turbine component transport for all 62 turb	ine sites:		-	\$	868,000.0
3 Nacelle housing, blade, and other component disposal. Dispo					
scrappable components are based on an estimated 90,000 lbs/	turbine. Di	isposal fe	es are general	lly ba	sed on weigh
(in tons).					
Total estimated weight of blades and nacelle:	45	tons			
Disposal fee (based on Bangor area landfill rates):					
\$	133.00	/ton			
Total estimate for nacelle housing and blade disposal for all 62	turbine site	es:		\$	371,100.0
С <u>і</u>					,
MET Tower disassembly/removal:					
A. Disassembly costs for the MET towers are based on the as	mation	hat it mill	talta a 5 mar		- 16 hours to
A. Disassembly costs for the MET towers are based on the as disassemble each MET tower.	sumption t	nat it will	take a 5-mar	1 crev	v to nours to
Estimated labor rate: \$		/man-h	our		
Total estimate for MET disassembly labor cost for five (5)	towers:				
		\$	10,000.00		
B. Additionally, equipment rental is estimated at approximate	ly 16 hours	for each	MET tower t	to ass	ist with the
B. Additionally, equipment rental is estimated at approximate disassembly, partially remove foundations, and reclaim the		for each	MET tower t	to ass	ist with the
disassembly, partially remove foundations, and reclaim the	site.		MET tower t	to ass	ist with the
disassembly, partially remove foundations, and reclaim the Total estimated labor & equip. rate: \$	site. 200.00		MET tower t	to ass	ist with the
disassembly, partially remove foundations, and reclaim the Total estimated labor & equip. rate: \$ Total estimate for MET disassembly equipment cost for fr	site. 200.00	/hour		to ass	ist with the
disassembly, partially remove foundations, and reclaim the Total estimated labor & equip. rate: \$ Total estimate for MET disassembly equipment cost for fr towers:	site. 200.00 ve (5)	/hour \$	MET tower t 16,000.00		
disassembly, partially remove foundations, and reclaim the Total estimated labor & equip. rate: \$ Total estimate for MET disassembly equipment cost for fr	site. 200.00 ve (5)	/hour \$		to ass	
disassembly, partially remove foundations, and reclaim the Total estimated labor & equip. rate: \$ Total estimate for MET disassembly equipment cost for fr towers: Total estimate for MET tower disassembly/removal for five (5)	site. 200.00 ve (5)	/hour \$			
disassembly, partially remove foundations, and reclaim the Total estimated labor & equip. rate: \$ Total estimate for MET disassembly equipment cost for fr towers: Total estimate for MET tower disassembly/removal for five (5 Transportation of MET tower components to disposal/reclam	site. 200.00 ve (5) 5) towers is: nation site.	/hour \$	16,000.00	\$	26,000.0
disassembly, partially remove foundations, and reclaim the Total estimated labor & equip. rate: \$ Total estimate for MET disassembly equipment cost for fre towers: Total estimate for MET tower disassembly/removal for five (5 <u>Transportation of MET tower components to disposal/reclarr</u> A. Cost to transport the MET tower components to facilities	site. 200.00 ve (5) i) towers is: <u>nation site</u> . for scrap, r	/hour \$	16,000.00	\$	26,000.0
disassembly, partially remove foundations, and reclaim the Total estimated labor & equip. rate: \$ Total estimate for MET disassembly equipment cost for fr towers: Total estimate for MET tower disassembly/removal for five (5 Transportation of MET tower components to disposal/reclam	site. 200.00 ve (5) i) towers is: <u>nation site</u> . for scrap, r	/hour \$	16,000.00	\$	26,000.0
disassembly, partially remove foundations, and reclaim the Total estimated labor & equip. rate: \$ Total estimate for MET disassembly equipment cost for fre towers: Total estimate for MET tower disassembly/removal for five (5 <u>Transportation of MET tower components to disposal/reclar</u> A. Cost to transport the MET tower components to facilities	site. 200.00 ve (5) i) towers is: <u>nation site</u> . for scrap, r	/hour \$ ecycling o	16,000.00	\$	26,000.0
disassembly, partially remove foundations, and reclaim the Total estimated labor & equip. rate: \$ Total estimate for MET disassembly equipment cost for fr towers: Total estimate for MET tower disassembly/removal for five (5 <u>Transportation of MET tower components to disposal/reclam</u> A. Cost to transport the MET tower components to facilities estimated requirement of one (1) truck trip for each MET	site. 200.00 we (5) b) towers is: hation site. for scrap, r tower. 920.00	/hour \$ ecycling o	16,000.00	\$	26,000.0
<ul> <li>disassembly, partially remove foundations, and reclaim the Total estimated labor &amp; equip. rate: \$</li> <li>Total estimate for MET disassembly equipment cost for fretowers:</li> <li>Total estimate for MET tower disassembly/removal for five (5</li> <li>Transportation of MET tower components to disposal/reclam</li> <li>A. Cost to transport the MET tower components to facilities estimated requirement of one (1) truck trip for each MET Total estimated labor &amp; equip. cost: \$</li> </ul>	site. 200.00 we (5) b) towers is: hation site. for scrap, r tower. 920.00	/hour \$ ecycling o	16,000.00	\$	26,000.0
<ul> <li>disassembly, partially remove foundations, and reclaim the Total estimated labor &amp; equip. rate: \$</li> <li>Total estimate for MET disassembly equipment cost for fretowers:</li> <li>Total estimate for MET tower disassembly/removal for five (5</li> <li>Transportation of MET tower components to disposal/reclam</li> <li>A. Cost to transport the MET tower components to facilities estimated requirement of one (1) truck trip for each MET Total estimated labor &amp; equip. cost: \$</li> </ul>	site. 200.00 we (5) b) towers is: hation site. for scrap, r tower. 920.00	/hour \$ ecycling o /trip	16,000.00 or disposal ar	\$	26,000.0
disassembly, partially remove foundations, and reclaim the Total estimated labor & equip. rate: \$ Total estimate for MET disassembly equipment cost for fr towers: Total estimate for MET tower disassembly/removal for five (5 Transportation of MET tower components to disposal/reclam A. Cost to transport the MET tower components to facilities estimated requirement of one (1) truck trip for each MET Total estimated labor & equip. cost: \$ Total estimate for MET component trucking cost for five	site. 200.00 ve (5) 5) towers is: hation site. for scrap, r tower. 920.00 (5) towers:	/hour \$ ecycling of /trip \$	16,000.00 or disposal are 4,600.00	\$ e base	26,000.0 ed on an
disassembly, partially remove foundations, and reclaim the         Total estimated labor & equip. rate:       \$         Total estimate for MET disassembly equipment cost for fre         towers:         Total estimate for MET tower disassembly/removal for five (5         Transportation of MET tower components to disposal/reclam         A. Cost to transport the MET tower components to facilities estimated requirement of one (1) truck trip for each MET         Total estimate for MET component trucking cost for five         B. We have assumed that the concrete rubble generated from	site. 200.00 ve (5) b) towers is: hation site. for scrap, r tower. 920.00 (5) towers: the founda	/hour \$ ecycling of /trip \$ tions (wh	16,000.00 or disposal ar 4,600.00 hile separating	\$ e base	26,000.0 ed on an ir as necessar
<ul> <li>disassembly, partially remove foundations, and reclaim the Total estimated labor &amp; equip. rate: \$ Total estimate for MET disassembly equipment cost for fretowers:</li> <li>Total estimate for MET tower disassembly/removal for five (5)</li> <li>Transportation of MET tower components to disposal/reclam</li> <li>A. Cost to transport the MET tower components to facilities estimated requirement of one (1) truck trip for each MET Total estimate for MET component trucking cost for five</li> <li>B. We have assumed that the concrete rubble generated from will not be transported offsite but be used onsite as fill at t</li> </ul>	site. 200.00 ve (5) b) towers is: hation site. for scrap, r tower. 920.00 (5) towers: the founda oes of slope	/hour \$ ecycling of /trip \$ tions (whes, for ros	16,000.00 or disposal ar 4,600.00 hile separating ad base or top	\$ e base g reba	26,000.0 ed on an ar as necessar material, or
<ul> <li>disassembly, partially remove foundations, and reclaim the Total estimated labor &amp; equip. rate: \$ Total estimate for MET disassembly equipment cost for fretowers:</li> <li>Total estimate for MET tower disassembly/removal for five (5)</li> <li>Transportation of MET tower components to disposal/reclam</li> <li>A. Cost to transport the MET tower components to facilities estimated requirement of one (1) truck trip for each MET Total estimate for MET component trucking cost for five</li> <li>B. We have assumed that the concrete rubble generated from will not be transported offsite but be used onsite as fill at tother locations in need of fill as desired by the property ow</li> </ul>	site. 200.00 ve (5) i) towers is: for scrap, r tower. 920.00 (5) towers: the founda oes of slope yner. In the	/hour \$ ecycling of /trip \$ tions (whes, for ro- e unlikely	16,000.00 or disposal are 4,600.00 hile separating ad base or top event the ma	\$ e base g reba pping uterial	26,000.0 ed on an ur as necessar material, or cannot be
<ul> <li>disassembly, partially remove foundations, and reclaim the Total estimated labor &amp; equip. rate: \$ <ul> <li>Total estimate for MET disassembly equipment cost for fretowers:</li> </ul> </li> <li>Total estimate for MET tower disassembly/removal for five (5)</li> <li>Transportation of MET tower components to disposal/reclarr</li> <li>A. Cost to transport the MET tower components to facilities estimated requirement of one (1) truck trip for each MET Total estimate for MET component trucking cost for five</li> <li>B. We have assumed that the concrete rubble generated from will not be transported offsite but be used onsite as fill at tother locations in need of fill as desired by the property ow used on-site, the material will be transported for offsite used for the set of the se</li></ul>	site. 200.00 ve (5) i) towers is: i) towers is: for scrap, r tower. 920.00 (5) towers: the founda oes of slope yner. In the c. Costs to t	/hour \$ ecycling of /trip \$ tions (where, for rose unlikely rransport	16,000.00 or disposal are 4,600.00 hile separating ad base or top event the ma the foundatio	\$ e base g reba opping uterial on rul	26,000.0 ed on an ir as necessar material, or cannot be oble to
<ul> <li>disassembly, partially remove foundations, and reclaim the Total estimated labor &amp; equip. rate: \$ Total estimate for MET disassembly equipment cost for fretowers: Total estimate for MET tower disassembly/removal for five (5) Transportation of MET tower components to disposal/reclarr A. Cost to transport the MET tower components to facilities estimated requirement of one (1) truck trip for each MET Total estimate for MET component trucking cost for five</li> <li>B. We have assumed that the concrete rubble generated from will not be transported offsite but be used onsite as fill at t other locations in need of fill as desired by the property ow used on-site, the material will be transported for offsite used disposal are based on six (6) cubic yards of rubble for an estimate of the site of the</li></ul>	site. 200.00 ve (5) i) towers is: i) towers is: for scrap, r tower. 920.00 (5) towers: the founda oes of slope rer. In the c. Costs to t stimated on	/hour \$ ecycling of /trip \$ tions (wh es, for ro- e unlikely ransport e (1) dun	16,000.00 or disposal are 4,600.00 hile separating ad base or top event the ma the foundation p truck trip p	\$ e base oping uterial on rul oper M	26,000.0 ed on an ir as necessar material, or cannot be oble to IET tower si
<ul> <li>disassembly, partially remove foundations, and reclaim the Total estimated labor &amp; equip. rate: \$ Total estimate for MET disassembly equipment cost for fretowers: Total estimate for MET tower disassembly/removal for five (5) Transportation of MET tower components to disposal/reclarr A. Cost to transport the MET tower components to facilities estimated requirement of one (1) truck trip for each MET Total estimate for MET component trucking cost for five</li> <li>B. We have assumed that the concrete rubble generated from will not be transported offsite but be used onsite as fill at t other locations in need of fill as desired by the property ow used on-site, the material will be transported for offsite used</li> </ul>	site. 200.00 ve (5) i) towers is: i) towers is: for scrap, r tower. 920.00 (5) towers: the founda oes of slope rer. In the c. Costs to t stimated on	/hour \$ ecycling of /trip \$ tions (wh es, for ro- e unlikely ransport e (1) dun	16,000.00 or disposal are 4,600.00 hile separating ad base or top event the ma the foundation p truck trip p	\$ e base oping uterial on rul oper M	26,000.0 ed on an ir as necessar material, or cannot be oble to IET tower si
<ul> <li>disassembly, partially remove foundations, and reclaim the Total estimated labor &amp; equip. rate: \$ Total estimate for MET disassembly equipment cost for fretowers: Total estimate for MET tower disassembly/removal for five (5) Transportation of MET tower components to disposal/reclarr A. Cost to transport the MET tower components to facilities estimated requirement of one (1) truck trip for each MET Total estimate for MET component trucking cost for five</li> <li>B. We have assumed that the concrete rubble generated from will not be transported offsite but be used onsite as fill at t other locations in need of fill as desired by the property ow used on-site, the material will be transported for offsite used disposal are based on six (6) cubic yards of rubble for an estimate of the site of the</li></ul>	site. 200.00 ve (5) i) towers is: i) towers is: for scrap, r tower. 920.00 (5) towers: the founda oes of slope rer. In the c. Costs to t stimated on	/hour \$ ecycling of /trip \$ tions (wh es, for ro- e unlikely ransport e (1) dun	16,000.00 or disposal are 4,600.00 hile separating ad base or top event the ma the foundation p truck trip p	\$ e base oping uterial on rul oper M	26,000.0 ed on an ir as necessan material, or cannot be oble to IET tower si
<ul> <li>disassembly, partially remove foundations, and reclaim the Total estimated labor &amp; equip. rate:</li> <li>Total estimate for MET disassembly equipment cost for fretowers:</li> <li>Total estimate for MET tower disassembly/removal for five (5</li> <li><u>Transportation of MET tower components to disposal/reclar</u></li> <li>A. Cost to transport the MET tower components to facilities estimated requirement of one (1) truck trip for each MET Total estimate for MET component trucking cost for five</li> <li>B. We have assumed that the concrete rubble generated from will not be transported offsite but be used onsite as fill at t other locations in need of fill as desired by the property ow used on-site, the material will be transported for offsite used disposal are based on six (6) cubic yards of rubble for an estimate for an estimate of site (5) and (6) cubic yards of rubble for an estimate of the site of the property of the propert</li></ul>	site. 200.00 ve (5) i) towers is: i) towers is: for scrap, r tower. 920.00 (5) towers: the founda oes of slope rer. In the c. Costs to t stimated on	/hour \$ ecycling of /trip \$ tions (wh es, for ro- e unlikely ransport e (1) dun	16,000.00 or disposal are 4,600.00 hile separating ad base or top event the ma the foundation p truck trip p	\$ e base oping uterial on rul oper M	26,000.0 ed on an ir as necessar material, or cannot be oble to IET tower sin

Total estimated labor & equip. cost:	\$	400.00	/dump	o truck trip	
Total estimate for MET foundation th	ansportation cost for	five (5)			
towers:			\$	2,000.00	
Total estimate for MET tower disposal for	or five (5) towers is:				\$ 6,600.00



The		al opinion of probable costs for WTGs and						
Ele	ctri	cal Collection System						
	te th	nat as the direct-buried underground collected	or is buried de	eeper that 2 ft	, it will n	ot be remove	ed bu	t be abandon
5.1	Dis	sassembly of overhead collector lines and ass	sociated comp	oonents:				
	А.	Disassembly and spooling costs for the over assumption that the labor effort required we overhead wire.						
		Estimated total length of overhead lines:		93,900	feet			
		Estimated labor rate:	\$		/man-h	our		
		Total estimate for overhead collector lines of			\$	39,500.00		
	в	Equipment rates are estimated at the follow	ing rate for a	pprovimately	17 dave			
	р.	Estimated equipment rates:		1,700.00	-			
		Total estimate for overhead collector disass	\$ embly equipr		/day \$	79,900.00	•	
			ennery equipt		ন	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
	C.	Pole removal and filling of remaining hole,	based on the			e quantities:		
		Amount of poles:			each			
		Removal labor and equipment costs:	\$	160.00	/pole		-	
		Total estimate for overhead collector pole r			\$	20 400 00		
5.2	Tot <u>Tra</u>	tal for disassembly of overhead collector line ansportation of collector lines and associated The cost to transport the collector line and based on the number of spools required per	es: <u>components</u> associated co	mponents to	facilities			g or disposal
5.2	Tot <u>Tra</u>	tal for disassembly of overhead collector line ansportation of collector lines and associated The cost to transport the collector line and based on the number of spools required per eight (8) spools per truck.	es: <u>components</u> associated co	emponents to e sizes and ler	facilities	for scrap, rec	cyclin	g or disposal
5.2	Tot <u>Tra</u>	tal for disassembly of overhead collector line insportation of collector lines and associated The cost to transport the collector line and based on the number of spools required per eight (8) spools per truck. Estimated spools of collector line:	components associated co collector lin	emponents to e sizes and ler 150	facilities ngths for each	for scrap, rec	cyclin	g or disposal
5.2	Tot <u>Tra</u> A.	tal for disassembly of overhead collector line insportation of collector lines and associated The cost to transport the collector line and based on the number of spools required per eight (8) spools per truck. Estimated spools of collector line: Estimated labor & equipment cost:	es: <u>components</u> associated co collector lin \$	emponents to e sizes and ler	facilities ngths for each /truck t	for scrap, rec the project, a	cyclin	g or disposal
5.2	Tot <u>Tra</u> A.	tal for disassembly of overhead collector line insportation of collector lines and associated The cost to transport the collector line and based on the number of spools required per eight (8) spools per truck. Estimated spools of collector line: Estimated labor & equipment cost: Total estimate for collector lines disassembl Pole removal will be transported at a rate of	es: components associated co collector lin \$ y:	mponents to e sizes and len 150 1,400.00	facilities ngths for each /truck t \$	for scrap, rec the project, a trip 26,600.00	cyclin and a	g or disposal capacity of
5.2	Tot <u>Tra</u> A.	tal for disassembly of overhead collector line ansportation of collector lines and associated The cost to transport the collector line and based on the number of spools required per eight (8) spools per truck. Estimated spools of collector line: Estimated labor & equipment cost: Total estimate for collector lines disassembl Pole removal will be transported at a rate of given away.	es: components associated co collector lin \$ y:	mponents to e sizes and len 150 1,400.00	facilities ngths for each /truck t \$ x. It is as	for scrap, rec the project, a trip 26,600.00	cyclin and a	g or disposal capacity of
5.2	Tot <u>Tra</u> A.	tal for disassembly of overhead collector line ansportation of collector lines and associated The cost to transport the collector line and based on the number of spools required per eight (8) spools per truck. Estimated spools of collector line: Estimated labor & equipment cost: Total estimate for collector lines disassembl Pole removal will be transported at a rate of given away. Amount of poles:	es: components associated co r collector lin \$ ly: f 30 poles per	mponents to e sizes and len 150 1,400.00 : logging truck 246	facilities ngths for each /truck t \$ x. It is as each	for scrap, rec the project, a rrip 26,600.00 ssumed that p	cyclin and a	g or disposal capacity of
5.2	Tot <u>Tra</u> A.	tal for disassembly of overhead collector line insportation of collector lines and associated The cost to transport the collector line and based on the number of spools required per eight (8) spools per truck. Estimated spools of collector line: Estimated labor & equipment cost: Total estimate for collector lines disassembl Pole removal will be transported at a rate of given away. Amount of poles: Estimated labor & equipment costs:	s: <u>components</u> associated co r collector lin \$ ly: f 30 poles per \$	mponents to e sizes and len 150 1,400.00	facilities ngths for each /truck t \$ x. It is as each /truck t	for scrap, rec the project, a rip 26,600.00 ssumed that p	cyclin and a	g or disposal capacity of
5.2	Tot <u>Tra</u> A. B.	tal for disassembly of overhead collector line insportation of collector lines and associated The cost to transport the collector line and based on the number of spools required per eight (8) spools per truck. Estimated spools of collector line: Estimated labor & equipment cost: Total estimate for collector lines disassembl Pole removal will be transported at a rate of given away. Amount of poles: Estimated labor & equipment costs: Total estimate for overhead collector pole r	emoval:	mponents to e sizes and len 1,400.00 : logging truck 246 1,100.00	facilities ngths for each /truck t \$ x. It is as each	for scrap, rec the project, a rrip 26,600.00 ssumed that p	cyclin and a	g or disposal capacity of will be sold o
5.2	Tot <u>Tra</u> A. B. Tot <u>Rer</u>	tal for disassembly of overhead collector line insportation of collector lines and associated The cost to transport the collector line and based on the number of spools required per eight (8) spools per truck. Estimated spools of collector line: Estimated labor & equipment cost: Total estimate for collector lines disassembl Pole removal will be transported at a rate of given away. Amount of poles: Estimated labor & equipment costs:	es: <u>components</u> associated cor r collector lin \$ y: f 30 poles per \$ emoval: sociated com	mponents to e sizes and len 150 1,400.00 : logging truck 246 1,100.00 ponents:	facilities ngths for each /truck t \$ s. It is as each /truck t \$	for scrap, rec the project, a rrip 26,600.00 ssumed that p rrip 9,900.00	cyclin and a ooles	g or disposal capacity of will be sold o 36,500.0
5.2	Tot <u>Tra</u> A. B. Tot <u>Rer</u> and	tal for disassembly of overhead collector line insportation of collector lines and associated The cost to transport the collector line and based on the number of spools required per eight (8) spools per truck. Estimated spools of collector line: Estimated labor & equipment cost: Total estimate for collector lines disassembl Pole removal will be transported at a rate of given away. Amount of poles: Estimated labor & equipment costs: Total estimate for overhead collector pole r tal for transportation of collector line and as moval of pad-mount transformers. Removal	sociated components associated cor r collector lin \$ y: f 30 poles per \$ emoval: sociated com l of the pad-r	mponents to e sizes and len 150 1,400.00 : logging truck 246 1,100.00 ponents: nount transfo	facilities ngths for each /truck t \$ s. It is as each /truck t \$	for scrap, rec the project, a rrip 26,600.00 ssumed that p rrip 9,900.00	cyclin and a ooles	g or disposal capacity of will be sold o <u>36,500.0</u> re a total labo
5.2 5.3	Tot <u>Tra</u> A. B. Tot <u>Rer</u> and <u>Tra</u> scra	tal for disassembly of overhead collector line insportation of collector lines and associated The cost to transport the collector line and based on the number of spools required per- eight (8) spools per truck. Estimated spools of collector line: Estimated labor & equipment cost: Total estimate for collector lines disassemble Pole removal will be transported at a rate of given away. Amount of poles: Estimated labor & equipment costs: Total estimate for overhead collector pole re- tal for transportation of collector line and as moval of pad-mount transformers. Removal d equipment cost of \$500 per each.	ss: <u>components</u> associated cor r collector lin \$ y: f 30 poles per \$ emoval: sociated com l of the pad-r for all 62 turb he cost to tra location with	mponents to e sizes and len 150 1,400.00 • logging truck 246 1,100.00 ponents: nount transfo ine sites: nsport the pa	facilities ngths for each /truck t \$ x. It is as each /truck t \$ rmers is d-mount	for scrap, rec the project, a 26,600.00 ssumed that p 9,900.00 estimated to	yclin and a ooles requi \$ s to fa	g or disposal capacity of will be sold o <u>36,500.0</u> re a total labo <u>31,000.0</u> acilities for
5.2 5.3	Tot <u>Tra</u> A. B. Tot <u>Rer</u> and <u>Tra</u> scra \$22	tal for disassembly of overhead collector line insportation of collector lines and associated The cost to transport the collector line and based on the number of spools required per- eight (8) spools per truck. Estimated spools of collector line: Estimated labor & equipment cost: Total estimate for collector lines disassembl Pole removal will be transported at a rate of given away. Amount of poles: Estimated labor & equipment costs: Total estimate for overhead collector pole r tal for transportation of collector line and as moval of pad-mount transformers. Removal d equipment cost of \$500 per each. tal for removal of pad-mount transformers f ap, recycling or disposal is estimated to be a	ss: <u>components</u> associated cor r collector lin \$ y: f 30 poles per \$ emoval: sociated com l of the pad-r for all 62 turb he cost to tra location with	mponents to e sizes and len 150 1,400.00 : logging truck 246 1,100.00 ponents: nount transfo ine sites: nsport the pa in 2 hours (or	facilities ngths for each /truck t \$ x. It is as each /truck t \$ rmers is d-mount	for scrap, rec the project, a rip 26,600.00 ssumed that p 9,900.00 estimated to s transformers at an equipme	yclin and a ooles requi \$ s to fa	capacity of will be sold o 36,500.0 re a total labo 31,000.0 ncilities for

5.5 <u>Removal of pad-mount transformer foundations</u>. Removal of the pad-mount transformer foundations and cutting

332,000.00

\$



of cables and conduits to a depth of two feet below grade will require various types of hydraulic equipment.

Estimated labor & equipment cost:	\$	1,000.00 /site	
Total for removal of pad-mount transformer f	oundations f	for all 62 turbine sites:	\$ 62,000.00

5.6 <u>Transportation of pad-mount transformer foundation rubble and disposal</u>. The rubble from the pad-mount transformer foundations is approximately ten (10) cubic yards per turbine site. As it is assumed the steel rebar will be separated from the concrete debris, the rubble essentially becomes an inert material. Therefore, we have assumed that the concrete rubble generated will not be transported offsite but be used onsite as fill at toes of slopes, for road base or topping material, or at other locations in need of fill as desired by the property owner. Costs to transport the foundation rubble within the project boundaries, in comparison to other decommissioning costs, are assumed to be negligible. In the unlikely event the material cannot be used on-site, the material will be transported for offsite use. Costs to transport the foundation rubble to disposal are based on an estimated requirement of one (1) dump truck trip for each turbine site.

Total estimated labor & equipment cost:	\$	400.00 /dump t	ruck trip	
Total estimate for foundation transportation c	osts for all 62	2 turbine sites:	\$	24,800.00

## 6. Electrical Substation

The costs for removing the substation is difficult to assess. This section gives a general description of the assumptions made for the demolition costs of this item.

6.1 Disassembly of substation and associated components.

The total opinion of probable costs for Electrical Collection System removal:

A. Disassembly costs for the substation is based on the assumption that the labor effort required will be a 5-man crew working for approximately four (4) weeks.

Estimated labor rate:	\$ 35.00	/mar	n-hour
Total estimate for substation disassembly:		\$	28,000.00

B. The disassembly will require a variety of construction equipment; it is difficult to estimate specific equipment requirements. In lieu of specific equipment rates, our opinion of probable cost includes a weekly rental equipment allowance for the assumed four (4) weeks.

Estimated equipment rental rate:	\$	33,000.00	/week		
Total estimate for substation disassembly:			\$	132,000.00	
Total for disassembly of substation and associate	ed components	:			\$ 160,000.00

6.2 <u>Transport substation components to disposal/reclamation site</u>. Costs to transport the substation components to facilities for scrap, recycling or disposal are based on an estimated one (1) truck trip per day for four (4) weeks totaling 20 truck trips from the substation site.

Estimated labor & equipment costs:	\$	1,100.00 /truck trip	
Total for transport of substation components t	o disposal/re	eclamation site:	\$ 22,000.00

6.3 Removal and transportation/disposal of substation foundations.

A. Removal of the substation foundations to a depth of two (2) feet below grade will require various forms of hydraulic equipment and various dozers and loaders. Estimated foundation rubble volume is based on the foundation dimensions of these facilities.

Estimated foundation rubble volume:	255 cubic yards			
Estimated labor & equipment costs:	\$	100.00 /cubic y	vard	
Total estimate for substation foundation	removal:	\$	25,500.00	

B. We have assumed that the concrete rubble generated from the foundations (while separating rebar as necessary)



will not be transported offsite but be used onsite as fill at toes of slopes, for road base or topping material, or at other locations in need of fill as desired by the property owner. In the unlikely event the material cannot be used on-site, the material will be transported for offsite use. Costs to transport the foundation rubble to disposal are based on 255 cubic yards of rubble, and 10 cubic yards per dump truck trip.

	Estimated labor & equipment costs:	\$	400.00	/dum	np truck trip	
	Total estimate for substation foundation	n transportation:		\$	10,400.00	
То	tal for removal and transportation/dispo	sal of substation four	ndations:			\$ 35,900.00

## 6.4 <u>Re-grading of substation site:</u>

A. For the restoration of the substation site, we are assuming that all excavated areas will be brought up to grade and sloped to drain with suitable fill material generated from the re-grading of the site or from off-site sources. The estimated cost includes additional fill, topsoil or other organic matter to support growth, seed, and mulch.

Approximate disturbed area:		120,000 SF/Sub	ostation Site
Estimated cost per 1000 SF (1 MSF):	\$	330.00 /MSF	
Total estimated re-grading material cost f	or substation:	\$	39,600.00

B. This re-grading and restoration work is estimated to take a dozer and operator approximately seven (7) days to complete.

Labor & equipment rate:	\$	200.00 /hour		
Total re-grading and restoration work for	substation:	\$	11,200.00	
Total estimate for re-grading substation site is	:			\$ 50,800.00
Total opinion of probable costs for Electrical Su	bstation remov	al:		\$ 268,700.00

# 7. Electrical GenLead System

## 7.1 Disassembly of overhead GenLead lines and associated components:

A. Disassembly and spooling costs for the overhead GenLead lines and associated components are based on the assumption that the labor effort required will be a 3-man crew working for four (4) hours per 1,000 feet of overhead wire.

Estimated total length of overhead lines:	:	90,820 feet			
Estimated labor rate:	\$	35.00 /man-h	nour		
Total estimate for overhead GenLead di	sassembly:	\$	38,700.00		

B. Equipment rates are estimated at the follow	wing rate for a	pproximately	46 days.			
Estimated equipment rates:	\$	1,700.00	/day			
Total estimate for overhead GenLead disas	ssembly equip	ment:	\$	78,200.00	•	
C. Pole removal and filling of remaining hole. Amount of poles:	, based on the	0 11	proximat each	e quantities:		
Removal labor and equipment costs:	\$	160.00	/pole			
Total estimate for overhead GenLead pole	removal:		\$	45,600.00	•	
Total for disassembly of overhead GenLead lin	nes:				\$	162,500.00

## 7.2 Transportation of GenLead lines and associated components

A. The cost to transport the GenLead lines and associated components to facilities for scrap, recycling or disposal is based on the number of spools required per GenLead line sizes and lengths for the project, and a capacity of eight (8) spools per truck.

Estimated spools of GenLead line:

153 each



	-	Estimated labor & equipment cost:	\$	1,400.00		1	_	
	,	Total estimate for GenLead lines disassembly:			\$	28,000.00		
		Pole removal will be transported at a rate of 30 given away.	poles per	logging truc	k. It is	assumed that p	oles	will be sold o
		Amount of poles:		285	each			
		Estimated labor & equipment costs:	\$	1,100.00	/truc	k trip		
	,	Total estimate for overhead GenLead pole rem	noval:		\$	11,000.00	-	
	Tot	al for transportation of GenLead line and assoc	ciated con	nponents:			\$	39,000.0
Tot	tal op	pinion of probable costs for Electrical GenLe	ad Systen	n removal:			\$	201,500.0
		. *	2					
Dy	nam	ic Reactive Device Facility						
81	Buil	lding removal						
0.1								
	Den	molition of the 12,000 square foot building, inc	luding lab	or, equipmer	it, and	transportation t	to fac	ilities for sci
	recy	cling, or disposal is based on a removal rate of	20,100 ct	bic feet per o	lay ove	er 18 days at a d	aily c	ost of \$7,60
	,			Ĩ	2	,	5	
								¢124.000
82	Dia	assembly of exterior associated components						\$136,800.
8.2		assembly of exterior associated components.			(1		1 1.1	
8.2	Α.	assembly of exterior associated components. Disassembly costs for the exterior associated correquired will be a 5-man crew working for sever	· ·		the as	sumption that t	he lat	
8.2	A	Disassembly costs for the exterior associated co	· ·	i.	the as /man	Î.	he lat	
8.2	A	Disassembly costs for the exterior associated corequired will be a 5-man crew working for seve	en (7) days \$	i.		-	he lat	
8.2	A	Disassembly costs for the exterior associated or required will be a 5-man crew working for seve Estimated labor rate: Total estimate for exterior component disasser The disassembly will require a variety of constr requirements. In lieu of specific equipment rat	en (7) days \$ mbly: ruction eq res, our op	35.00 uipment; it is	/man \$ difficu	1-hour 9,800.00 Ilt to estimate sp	- pecifi	oor effort c equipment
8.2	A. 1	Disassembly costs for the exterior associated correquired will be a 5-man crew working for sever Estimated labor rate: Total estimate for exterior component disasser The disassembly will require a variety of constr requirements. In lieu of specific equipment rat equipment allowance for the assumed seven (7	en (7) days \$ mbly: ruction eq res, our op	35.00 uipment; it is	/man \$ difficu pable c	1-hour 9,800.00 Ilt to estimate sp ost includes a w	- pecifi	oor effort c equipment
8.2	A	Disassembly costs for the exterior associated or required will be a 5-man crew working for seve Estimated labor rate: Total estimate for exterior component disasser The disassembly will require a variety of constr requirements. In lieu of specific equipment rat	en (7) days \$ nbly: ruction eq tes, our op ) days.	a. 35.00 uipment; it is binion of prol	/man \$ difficu pable c	1-hour 9,800.00 Ilt to estimate sp ost includes a w	- pecifi	oor effort c equipment
8.2	A. 1	Disassembly costs for the exterior associated correquired will be a 5-man crew working for seven Estimated labor rate: Total estimate for exterior component disassers The disassembly will require a variety of constr requirements. In lieu of specific equipment rate equipment allowance for the assumed seven (7) Estimated equipment rental rate:	en (7) days s nbly: ruction eq res, our op ) days. \$	a. 35.00 uipment; it is binion of prol	/man \$ difficu pable c /wee	1-hour 9,800.00 Ilt to estimate sp ost includes a w k	- pecifi	oor effort c equipment r rental
8.2	A. 1	Disassembly costs for the exterior associated correquired will be a 5-man crew working for seven Estimated labor rate: Total estimate for exterior component disasser The disassembly will require a variety of constr requirements. In lieu of specific equipment rate equipment allowance for the assumed seven (7) Estimated equipment rental rate: Total estimate for equipment rental:	en (7) days s nbly: ruction eq res, our op ) days. \$	a. 35.00 uipment; it is binion of prol	/man \$ difficu pable c /wee	1-hour 9,800.00 Ilt to estimate sp ost includes a w k	pecifiq veekly	oor effort c equipment r rental
	A.	Disassembly costs for the exterior associated correquired will be a 5-man crew working for seven Estimated labor rate: Total estimate for exterior component disasser The disassembly will require a variety of constr requirements. In lieu of specific equipment rate equipment allowance for the assumed seven (7) Estimated equipment rental rate: Total estimate for equipment rental: al for disassembly of exterior associated compo-	en (7) days \$ nbly: ruction eq res, our op ) days. \$ onents:	:. 35.00 uipment; it is binion of prol 33,000.00	/man \$ difficu pable c /wee	1-hour 9,800.00 Ilt to estimate sp ost includes a w k	pecifiq veekly	oor effort c equipment r rental
	A. 1 B. 7 Tota	Disassembly costs for the exterior associated correquired will be a 5-man crew working for seven Estimated labor rate: Total estimate for exterior component disasser The disassembly will require a variety of constr requirements. In lieu of specific equipment rat equipment allowance for the assumed seven (7) Estimated equipment rental rate: Total estimate for equipment rental: al for disassembly of exterior associated compo- noval and transportation/disposal of Facility for	en (7) days \$ nbly: ruction eq res, our op ) days. \$ onents: oundations	 35.00 uipment; it is binion of prol 33,000.00	/man \$ difficu pable c /wee \$	1-hour 9,800.00 Ilt to estimate sp ost includes a w k 46,200.00	pecifiq veekly - \$	oor effort c equipment rental 56,000.
	A. Tota Rem A. T	Disassembly costs for the exterior associated correquired will be a 5-man crew working for sever Estimated labor rate: Total estimate for exterior component disasser The disassembly will require a variety of constr requirements. In lieu of specific equipment rate equipment allowance for the assumed seven (7) Estimated equipment rental rate: Total estimate for equipment rental: al for disassembly of exterior associated compo- noval and transportation/disposal of Facility for Removal of the Facility building and associated	en (7) days \$ nbly: ruction eq tes, our op ) days. \$ ponents: pundations I compone	uipment; it is binion of prob 33,000.00	/man \$ difficu pable c /wee \$ ons to	1-hour 9,800.00 Ilt to estimate sp ost includes a w k 46,200.00 a depth of two	pecific veekly - \$ (2) fe	oor effort c equipment rental 56,000.0
	A	Disassembly costs for the exterior associated correquired will be a 5-man crew working for sever Estimated labor rate: Total estimate for exterior component disasser The disassembly will require a variety of constr requirements. In lieu of specific equipment rate equipment allowance for the assumed seven (7) Estimated equipment rental rate: Total estimate for equipment rental: al for disassembly of exterior associated compo- noval and transportation/disposal of Facility for Removal of the Facility building and associated will require various forms of hydraulic equipment	en (7) days s nbly: ruction eq res, our op ) days. s onents: oundations l component and va	uipment; it is vinion of pro 33,000.00	/man \$ difficu pable c /wee \$ ons to and loa	1-hour 9,800.00 Ilt to estimate sp ost includes a w k 46,200.00 a depth of two aders. Estimate	pecific veekly - \$ (2) fe	oor effort c equipment r rental 56,000. et below gra
	A	Disassembly costs for the exterior associated correquired will be a 5-man crew working for sever Estimated labor rate: Total estimate for exterior component disasser The disassembly will require a variety of constr requirements. In lieu of specific equipment rate equipment allowance for the assumed seven (7) Estimated equipment rental rate: Total estimate for equipment rental: al for disassembly of exterior associated compo- noval and transportation/disposal of Facility for Removal of the Facility building and associated	en (7) days s nbly: ruction eq res, our op ) days. s onents: oundations l component and va	uipment; it is vinion of pro 33,000.00	/man \$ difficu pable c /wee \$ ons to and loa	1-hour 9,800.00 Ilt to estimate sp ost includes a w k 46,200.00 a depth of two aders. Estimate	pecific veekly - \$ (2) fe	oor effort c equipment r rental 56,000. et below gra
	A. Tota	Disassembly costs for the exterior associated or required will be a 5-man crew working for seve Estimated labor rate: Total estimate for exterior component disasser The disassembly will require a variety of constr requirements. In lieu of specific equipment rat equipment allowance for the assumed seven (7) Estimated equipment rental rate: Total estimate for equipment rental: al for disassembly of exterior associated compo- noval and transportation/disposal of Facility for Removal of the Facility building and associated will require various forms of hydraulic equipment volume is based on the approximated foundation	en (7) days s nbly: ruction eq res, our op ) days. s onents: oundations l component and va	235.00 uipment; it is binion of prob 33,000.00 23,000.00 24 25 25 25 25 25 25 26 27 27 27 27 27 27 27 27 27 27 27 27 27	/man \$ difficut bable c /wee \$ ons to and loa e facilit	a depth of two aders. Estimates	pecific veekly - \$ (2) fe	oor effort c equipment rental 56,000.0
	A. Tota	Disassembly costs for the exterior associated correquired will be a 5-man crew working for sever Estimated labor rate: Total estimate for exterior component disasser The disassembly will require a variety of constr requirements. In lieu of specific equipment rate equipment allowance for the assumed seven (7) Estimated equipment rental rate: Total estimate for equipment rental: al for disassembly of exterior associated compo- noval and transportation/disposal of Facility for Removal of the Facility building and associated will require various forms of hydraulic equipment	en (7) days s nbly: ruction eq res, our op ) days. s onents: oundations l component and va	235.00 uipment; it is binion of prob 33,000.00 23,000.00 24 25 25 25 25 25 25 26 27 27 27 27 27 27 27 27 27 27 27 27 27	/man \$ difficu pable c /wee \$ ons to and loa	a depth of two aders. Estimates	pecific veekly - \$ (2) fe	c equipment rental 56,000.0 et below gra
	A. Tota	Disassembly costs for the exterior associated or required will be a 5-man crew working for seve Estimated labor rate: Total estimate for exterior component disasser The disassembly will require a variety of constr requirements. In lieu of specific equipment rat equipment allowance for the assumed seven (7) Estimated equipment rental rate: Total estimate for equipment rental: al for disassembly of exterior associated compo- noval and transportation/disposal of Facility for Removal of the Facility building and associated will require various forms of hydraulic equipment volume is based on the approximated foundation	en (7) days s nbly: ruction eq res, our op ) days. s onents: oundations l component and va	235.00 uipment; it is binion of prob 33,000.00 23,000.00 24 25 25 25 25 25 26 27 27 27 27 27 27 27 27 27 27 27 27 27	/man \$ difficu pable c /wee \$ ons to and loa e facilit	a depth of two aders. Estimates	pecific veekly - \$ (2) fe	c equipment rental 56,000. et below gra

B. We have assumed that the concrete rubble generated from the foundations (while separating rebar as necessary) will not be transported offsite but be used onsite as fill at toes of slopes, for road base or topping material, or at other locations in need of fill as desired by the property owner. In the unlikely event the material cannot be used on-site, the material will be transported for offsite use. Costs to transport the foundation rubble to disposal are based on 10 cubic yards per dump truck trip.

Estimated foundation rubble volume:	860 cubic yards				
Estimated labor & equipment costs:	\$	400.00 /dump truck trip			
Total estimate for Facility foundation trans	sportation:		\$	34,400.00	
Total for removal and transportation/disposal	of Facility four	idation:			\$ 120,400.00



## 8.4 <u>Re-grading of Facility site:</u>

A. For the restoration of the Facility site, we are assuming that all excavated areas will be brought up to grade and sloped to drain with suitable fill material. The estimated cost includes additional fill, topsoil or other organic matter to support growth, seed, and mulch.

Approximate disturbed area:	roximate disturbed area:		
Estimated cost per 1000 SF (1 MSF):	\$	330.00 /MSF	
Total estimated re-grading cost for Facility	\$	16,500.00	

B. This re-grading and restoration work is estimated to take a dozer and operator approximately three (3) days to complete.

Labor & equipment rate:	\$	200.00	/hour			
Total re-grading and restoration work for	Facility building:		\$	4,800.00	-	
Total estimate for re-grading Facility site is:					\$	21,300.00
Total opinion of probable costs for <b>Dynamic Re</b>	eactive Device Fa	cility rem	oval:			\$334,500.00

-	-			
The total opinion of probable	disassembly and removal	l costs from summing the items above:	¢	6,780,700.00
The total opinion of probable	. disassembly and temoval	t costs from summing the fields above.	Ψ	0,700,700.00

## Scrap Value

2.

For the purposes of this decommissioning plan we assumed that all metal materials to be decommissioned would be sold as scrap to a recycling yard in the Bangor, Maine area. The presumed scrap value is based on the following conservative estimates:

1. <u>Presumed scrap value of WTGs</u>. In estimating the scrap value of the WTGs, the following component weight estimates were used (all weights are in pounds). No scrap value was assumed for the blades or nacelle shell.

Base:	179,980	Nacelle			144,900		
Mid:	179,330	Rotor			73,500		
Top:	146,513						
Total estimated weight i	for each WTG:		724,223	lbs			
Current prices for #1 steel scra area metal recycling center: Total opinion of <b>presumed scr</b>		#1 steel <b>'Gs:</b>		\$	230.00	/ton \$	5,163,800.00
• <u>Presumed scrap value of the original transformer cost</u> .	external transformers	. Scrap va	lue of the e	xternal tra	nsformer is	estim	ated at 10% of
Estimated original cost for exter	rnal transfomers:	\$	70,000.00	each			
Estimated scrap value (10%):		\$	7,000.00	each			
Total opinion of <b>presumed scr</b>	ap value for all 62 ext	ernal trans	sformers:			\$	434,000.00



	,					
3.	<b>Presumed scrap value of the MET towers.</b> In estimation component weight and steel scrap values were used:	mating	the scrap value o	f the MET to	owers, the follo	wing
	MET tower component weight:		6,000	lbs		
	Average steel scrap value:	\$	230.00	/ton		
	Total opinion of presumed scrap value of all five (5	) MET	l' towers:		\$	3,500.00
4.	<b>Overhead Collector wiring scrap value.</b> Quantities electrical drawings prepared by SGC and used as a bas consists of aluminum (steel reinforced) conductors.					
	Estimated linear feet of wiring:		281,685	ft		
	Estimated weight of scrappable aluminum:		246,155	lbs		
	Current price for aluminum scrap at a Bangor area	•		1		
	metal recycling center:	\$	500.00	/ton		
	Total opinion of presumed scrap value of the overh	head co	ollector wiring:		\$	61,600.00
5.	<b>Presumed scrap value of Substation</b> . Based on our of 50 years. Therefore, at 20 years the substation could to be very conservative, we have estimated the substation of substation could be very conservative.	d have a	a value of approx	timately 50%	of its original <b>c</b>	
	Original substation construction estimate, less the					
	transformer:	\$	8,500,000.00			
	Estimated substation scrap value (2%):	\$	170,000.00			
	Total opinion of presumed scrap value of the subst	ation:			\$	170,000.00
6.	<b>Presumed scrap value of Substation Transformer</b> approximately \$2,500,000. Scrap value is estimated at					mated to be
	Original substation transformer construction cost:	¢	2 500 000 00			
	Estimated scrap value (10%):	\$ \$	2,500,000.00 250,000.00			
	Total opinion of presumed scrap value of the subst	ation t	transformer(s):		\$	250,000.00
7.	<b>Overhead GenLead wiring scrap value.</b> Quantities electrical drawings prepared by SGC and used as a bas consists of aluminum (steel reinforced) conductors.		estimated scrappa	ble metal am		
	Estimated linear feet of wiring:		272,460	ft		
	Estimated weight of scrappable aluminum:		297,799	lbs		
	Current price for aluminum scrap at a Bangor area metal recycling center:	\$	500.00	/ton		
	Total opinion of presumed scrap value of the overh	nead G	enLead wiring:		\$	74,500.00



Scrap Value Summary		
The total opinion of probable scrap value from summing the items above:		\$ 6,157,400.00
Decommissioning Summary		
The total opinion of probable disassembly and removal costs is:	\$ 6,780,700.00	
The total opinion of probable scrap value for the project is:	\$ 6,157,400.00	
The net estimated opinion of probable <u>cost</u> for decommissioning is:		\$ 623,300.00

Please do not hesitate to contact us with any questions regarding the information contained in this review. We appreciate the opportunity to work with you on this project.

Sincerely,

James W. Sewall Company

Janine Anuchiron

```
Janine S. Murchison, PE
Project Manager
jmurchison@jws.com
phone: (207)492-1014
```

83411E