

OLCERI Machine Shop Installation Plan

Machine & Welding Shop Fully Equipped for All Vehicle & Machine Repair and Tool-Making

Project Financing

Total Project Cost:	\$560,432
Funding & Pooled Resources obtained to date:	\$238,000
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Balance of Funding Sought:	\$322,432

Purposes of this Project

To enable OLCERI to build, maintain and repair virtually any metal structure, machine, motor, basic engine, tool or vehicle using just its own facilities and salvaged parts.

To be able to perform factory fabrication & maintenance.

To provide mechanical and machine services to all OLCERI commercial, internal and external projects and activities.

Requirements

1. Production bay capacity to work on equipment the size of 2 large pieces of heavy construction or road equipment or 4 light wheeled vehicles.
2. Operational capacity in all weather & seasons
3. Due to frequent electrical blackouts at the Pine Ridge, internal power supply capacity from generators and/or solar/wind is required (100 kW peak loads).

Background & Project Information

Pine Ridge Reservation, a territory of 5,000 square miles and a population of 35,000 people, the majority of Shannon County, South Dakota, has NO machine or vehicle shop. This plan establishes at OLCERI the first ever complete machine and equipment repair facility.

Currently there is no physical structure on the OLCERI site (or anywhere else) to house a such a shop. However, there is a partially constructed 66' x 56' pole barn on-site that would serve for the first phase of shop establishment if completed. There are also individuals who would be willing to pool their equipment and work with OLCERI if a physically secure structure were provided.

The pole barn is about 1/2 complete, requiring a roof, concrete slab floor, doors, wiring & fixtures and insulation. At that point, the space would be secured and equipment could be acquired & delivered.

Bryan Deans has \$40,000 worth of machine tools and equipment he could bring on-site (currently he is unable to do so because of no secure location). Equipment includes: wire feed welder, master craftsman tool set, chop saw, torch, drill press, parts tank, engine stands, motor hoist.

Bruce Renee, a local resident and OLCERI staff member, has \$150,000 he will pool, including many types of heavy equipment maintenance tools. Bruce is a master machinist and 20 year veteran heavy equipment mechanic.

What is not available or not sufficient in the pooled equipment inventory is listed below.

Fully equipped field service trucks ("contact trucks") are needed to perform maintenance on vehicles & heavy equipment in the field and perform all manner of construction / maintenance functions when OLCERI gets into the business of establishing self-sufficient extended family homesteads.

Planned Shop Capabilities

This shop would be the maintenance hub of OLCERI infra-structure in all areas. It is needed to maintain and repair all farm & ranch equipment, tractor-trailer equipment, help build and maintain the bio-diesel plant as well as all other structures.

Both Bruce and Bryan are both experienced mechanics, but there is also a large pool of experienced mechanics on the reservation which could be drawn upon as OLCERI activities expanded.

Funding Request Summary

Category	Amount
Base machine shop	\$ 188,200
Pole barn structure completion (to house shop)	\$ 48,332
Fully-equipped field service vehicles (2)	\$ 85,900
TOTAL	\$ 322,432

Detailed Startup Budget

	Quantity	Estimated Cost	Extension	Totals
Machine shop				\$ 188,200
10 ft slip roll sheet metal break and shear	1	\$ 25,000	\$ 25,000	
10-12 ft lathe	1	\$ 25,000	\$ 25,000	
drill press, lg (1" to 1-1/2") with bits	1	\$ 2,500	\$ 2,500	
turret-head iron worker + dies	1	\$ 8,000	\$ 8,000	
low speed diamond bit cut-off saw	1	\$ 1,000	\$ 1,000	
Miller 251 Miller-Matic mig welders with spool guns	2	\$ 2,700	\$ 5,400	
36" - 48" bed lathe-mill combo	1	\$ 10,000	\$ 10,000	
aircraft rivet tooling, complete set	1	\$ 20,000	\$ 20,000	
diesel generator, 50 kW (peak loads of shop expected to reach 100 kW)	2	\$ 4,500	\$ 9,000	
air compressors, 2 stage (20 hp, 175 psi)	2	\$ 5,000	\$ 10,000	
Hoist, service, 12,000 lb 4-post vehicle hoist.	1	\$ 5,000	\$ 5,000	
Overhead hoist/crane, 2 to 10 ton	1	\$ 5,000	\$ 5,000	
Plumbing: Pipe threading, bending,	1	\$ 2,000	\$ 2,000	
Hydraulic hose-building tools, fittings, supplies	1	\$ 20,000	\$ 20,000	
50 ton press	1	\$ 2,000	\$ 2,000	
hydraulic pipe bending machine	1	\$ 10,000	\$ 10,000	
tire changer, side-clamp	1	\$ 3,800	\$ 3,800	
wheel balancer, up to 20" (light to med trucks)	1	\$ 2,500	\$ 2,500	
Master craftsman tool kits	2	\$ 11,000	\$ 22,000	
Pole Barn completion, 3696 sq ft				\$ 48,332
Concrete Slab (sq ft)	3696	\$ 7	\$ 25,872	
Wiring			\$ 2,000	
Fixtures			\$ 1,500	
Doors, roll-ups (30 ft x 12 ft)			\$ 4,000	
Roof sheet metal (18 ga., 3'x16')	36	\$ 230	\$ 8,280	
Insulation (66' x 56')			\$ 5,000	
Labor (man-days)	15	\$ 112	\$ 1,680	
Field Service Trucks				\$ 85,900
Contact Truck, 1-1/4, diesel	2	\$ 15,000	\$ 30,000	
master tool kit	2	\$ 11,000	\$ 22,000	
compressors, 2 stage (12 hp or PTO, 175 psi)	2	\$ 2,000	\$ 4,000	
welder/generator combo, can be stick welders	2	\$ 4,500	\$ 9,000	
torch set	2	\$ 600	\$ 1,200	
20 ton air jacks	2	\$ 2,000	\$ 4,000	
air tools, full set	2	\$ 3,000	\$ 6,000	
Pipe vise, threader, bender - full set	2	\$ 2,500	\$ 5,000	
vise	2	\$ 100	\$ 200	

chopsaw	2	\$ 250	\$ 500	
air grease gun	2	\$ 1,000	\$ 2,000	
100 gal fuel & oil storage with pump, electric & hand	2	\$ 1,000	\$ 2,000	
TOTAL				\$ 322,432