



**SOUTHERN MONTANA ELECTRIC G & T COOPERATIVE, INC.
HIGHWOOD GENERATING STATION
TRANSMISSION LINES ROUTE ANALYSIS – SUMMARY**

In order to export electrical power from the Highwood Generating Station (HGS) it will be necessary to construct two short segments of 230kV transmission line. The first line segment, approximately 4.10 miles in length, will extend from the plant site to a new 230kV switchyard site proposed for location south and west of HGS. This terminus point coincides with an existing three-pole wood deadend transmission structure on NorthWest Energy's Broadview to Great Falls 230kV Transmission Line.

The second line segment, approximately 9.21 miles in length, extends south and west from the plant site, across the Missouri River north and east of Cochrane Dam and terminates at NorthWest Energy's existing Great Falls Switchyard, located north and west of Rainbow Dam.

Both line segments will be constructed in new rights-of-way typically extending 50 feet either side of centerline. Single pole weathering (corten) steel pole structures will be utilized for the entire length of both lines except where necessary to cross the Missouri River. Multiple-pole or H-frame structures may be required at this crossing point to maintain proper phase-to-phase and phase-to-ground clearances.

All running angle and deadend structures will be supported by steel-reinforced concrete caisson foundations eliminating the need for guys and anchors. All tangent structures will be direct embedded utilizing native or engineered soils as backfill. Structures are anticipated to vary in height between 80 and 100 feet and shall be constructed approximately every 500-700 feet along the rights-of-way depending upon terrain and obstacles.

Insulation will be provided by use of composite post and/or suspension insulators depending on the ultimate structure configuration chosen. The single circuit lines will consist of three 1272 kCM phase conductors protected by a single 3/8" EHS shield wire.