

## Section III

### STATUS OF PROJECTS

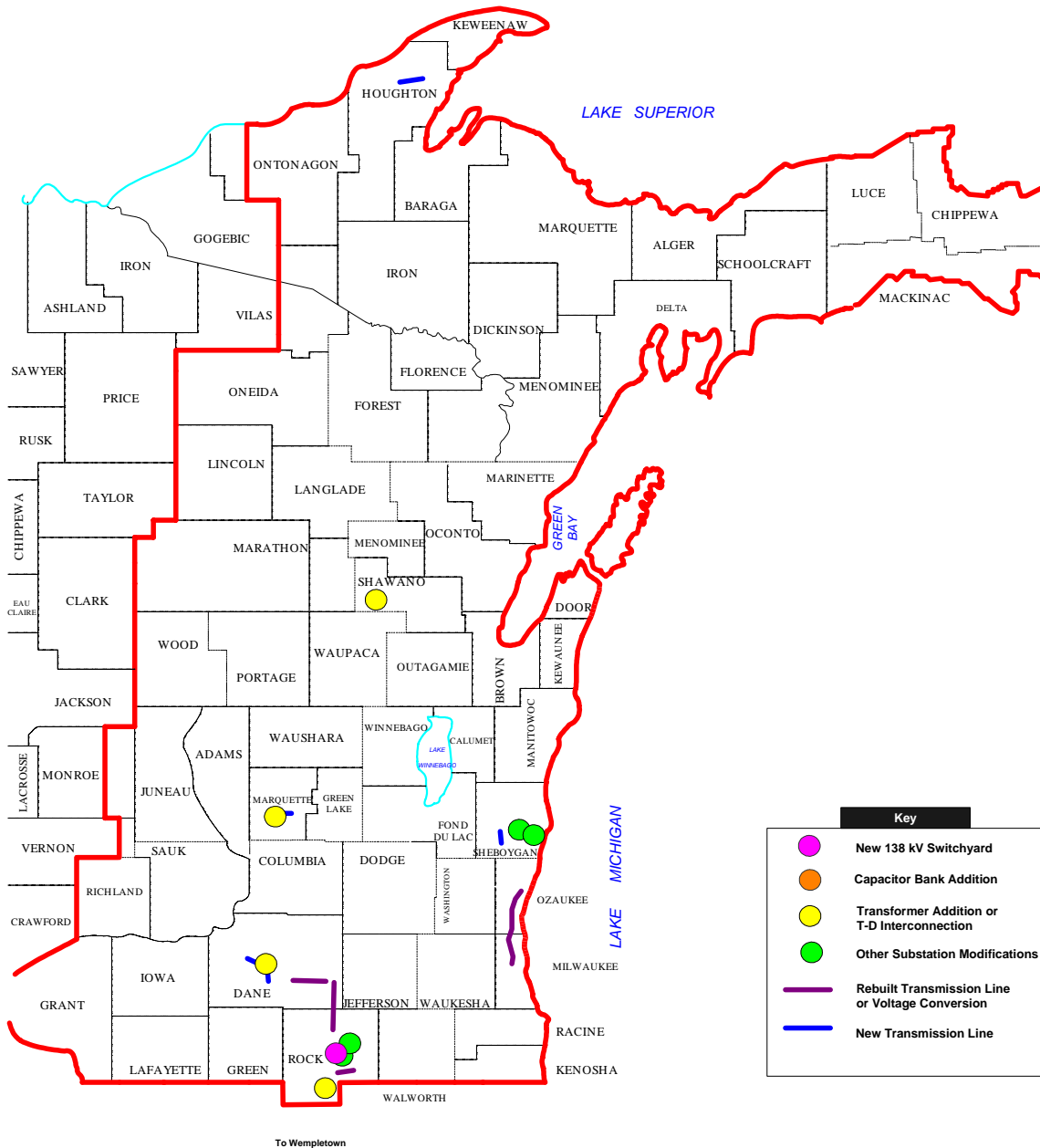
This section identifies transmission projects that were completed in 2003, are under construction or are in the approval stage. This section also provides a list of projects that ATC expects to file a construction application for during 2004. In addition, ATC has compiled a list of major projects constructed and/or contemplated since 2001. In this section, the status of those projects is shown graphically.

*Table III-1  
Projects Completed Since September 2003 10-Year Assessment*

Reference Number	Completed Additions	Planning Zone
1	Construct an Endeavor-Wautoma/Portage Tap 69 kV line	1
2	Uprate Whitcomb 115/69 kV transformer	1
3	Construct Elevation Tap-Elevation 69 kV line	2
4	Reconductor Christiana-Kegonsa portion of Christiana to Fitchburg 138 kV line	3
5	Reconfigure 69/138 kV circuits between Rock River and Janesville to create Rock River-Janesville and Rock River-Sunrise 138 kV circuits	3
6	Reconductor Colley Road-Blackhawk 138 kV line	3
7	Construct 138 kV switchyard at Riverside generation site (Townline Road Substation)	3
8	Construct 138 kV double circuit line from Townline Road to Rock River	3
9	Reconnect NW Beloit 69 kV load to Paddock-Blackhawk 138 kV line	3
10	Replace 200 A metering CT at Sheboygan Falls 69 kV	4
11	Retap metering CT at Lodestar 138 kV	4
12	Construct 138 kV line from Mullet River to N Mullet River and convert N Mullet River to Plymouth Sub #1 from 69 kV to 138 kV	4
13	Construct 69 kV switchyard at Tokay	3
14	Construct Fitchburg-Tokay-West Towne 69 kV underground line	3
15	Reconductor Russell-Rockdale 138 kV line	3
16	Rebuild Port Washington-Range Line double circuit 138 kV line	5

Five of the projects above were needed in order to accommodate new generation (#5, 7, 8 and 15 relate to the Riverside generation and #16 relate to the Port Washington generation). Four other projects were needed to accommodate T-D interconnection requests (#1, 3, 13 and 14). The Fitchburg-Tokay-West Towne line also provides additional reliability benefits. Two projects were needed to address chronic transmission service limitations (#4 and 6). The remaining projects (#2, 10, 11 and 12) were needed to address reliability issues.

**Figure III-1  
COMPLETED PROJECTS SINCE  
SEPTEMBER 2003 10-YEAR ASSESSMENT**



### Projects Under Construction

ATC is currently constructing or is planning construction on several projects:

#### *Projects Currently Under Construction*

Convert Pine-Grandfather-Tomahawk-Eastom 46 kV lines to 115 kV
Construct an Omro Industrial-Berlin/Omro 69 kV line
Move Reedsburg 6 MVA D-SMES unit to Clear Lake 115 kV
Uprate North Randolph-Ripon 69 kV line terminal equipment
Install 4.1 MVAR capacitor bank at Ripon 69 kV
Install additional 4.1 MVAR capacitor bank at Berlin 69 kV
Rebuild Skanawan-Highway 8 115 kV line to double circuit 115 kV
Construct Stone Lake-Arrowhead 345 kV line
Construct Hiawatha-Engadine 69 kV line
Expand Indian Lake 69 kV to accommodate Indian Lake-Glen Jenks 69 kV line
Rebuild from Nordic SS to Randville SS (5 miles) of single circuit 69 kV line to double circuit 69 kV
Rebuild Indian Lake to Glen Jenks to four circuits - two 138 kV, two 69 kV
Uprate Cedar-Freeman 138 kV line
Uprate Cedar-M38 138 kV line
Uprate Freeman-Presque Isle 138 kV line
Uprate Presque Isle-Cedar 138 kV line
Rebuild and convert one Hiawatha-Indian Lake 69 kV circuit to double circuit 138 kV standards, string one circuit initially and operate at 69 kV
Reconfigure 69/138 kV circuits between Rock River and Janesville to create Rock River-Janesville and Rock River-Sunrise 138 kV circuits
Convert Kilbourn-Zobel 69 kV line to 138 kV
Replace the existing 187 MVA 138/69 kV transformer at Sycamore with two 100 MVA transformers and reconfigure 138 kV bus
Rebuild Russell-Janesville 138 kV line
Install a second 138/69 kV transformer at North Randolph
Install 24 MVAR capacitor bank at new Birchwood 138 kV
Rebuild Femrite-Royster 69 kV line
Install 16.32 MVAR capacitor bank at Lone Rock
Expand Walnut Substation to interconnect West Campus generation
Install 16.3 MVAR capacitor bank at Kegonsa 69 kV
Install 20.4 MVAR capacitor bank at North Madison 69 kV
Install 24.5 MVAR capacitor bank at Cross Country 138 kV
Install 12.2 MVAR capacitor bank at Waunakee 69 kV
Install 7.2 MVAR capacitor banks on distribution system at/near Tokay
Install 7.2 MVAR capacitor banks on distribution system at/near West Middleton
Replace 200 A metering CT at Sheboygan Falls 69 kV
Retap metering CT at Lodestar 138 kV
Construct/rebuild double circuit 138/69 kV line from Pulliam to Bayport
Rebuild the Morgan-Falls-Pioneer-Stiles 138 kV line

*Projects Currently Under Construction (continued)*

Install 345 kV breaker for Edgewater 345/138 kV transformer (TR-22)
Replace two 800 A line traps at Edgewater 138 kV
Construct a tap to Belle Plain from the Badger-Caroline 115 kV line
Construct new Fox Energy switchyard
Construct a Fox Energy-Forest Junction 345 kV line
Rebuild Port Washington-Saukville double circuit 138 kV line
Rebuild Port Washington-Saukville single circuit 138 kV line

Projects with Pending Applications

ATC has filed either CA or CPCN applications with the Wisconsin Public Service Commission requesting authority to construct several projects. Those projects that are awaiting a PSC order are listed below:

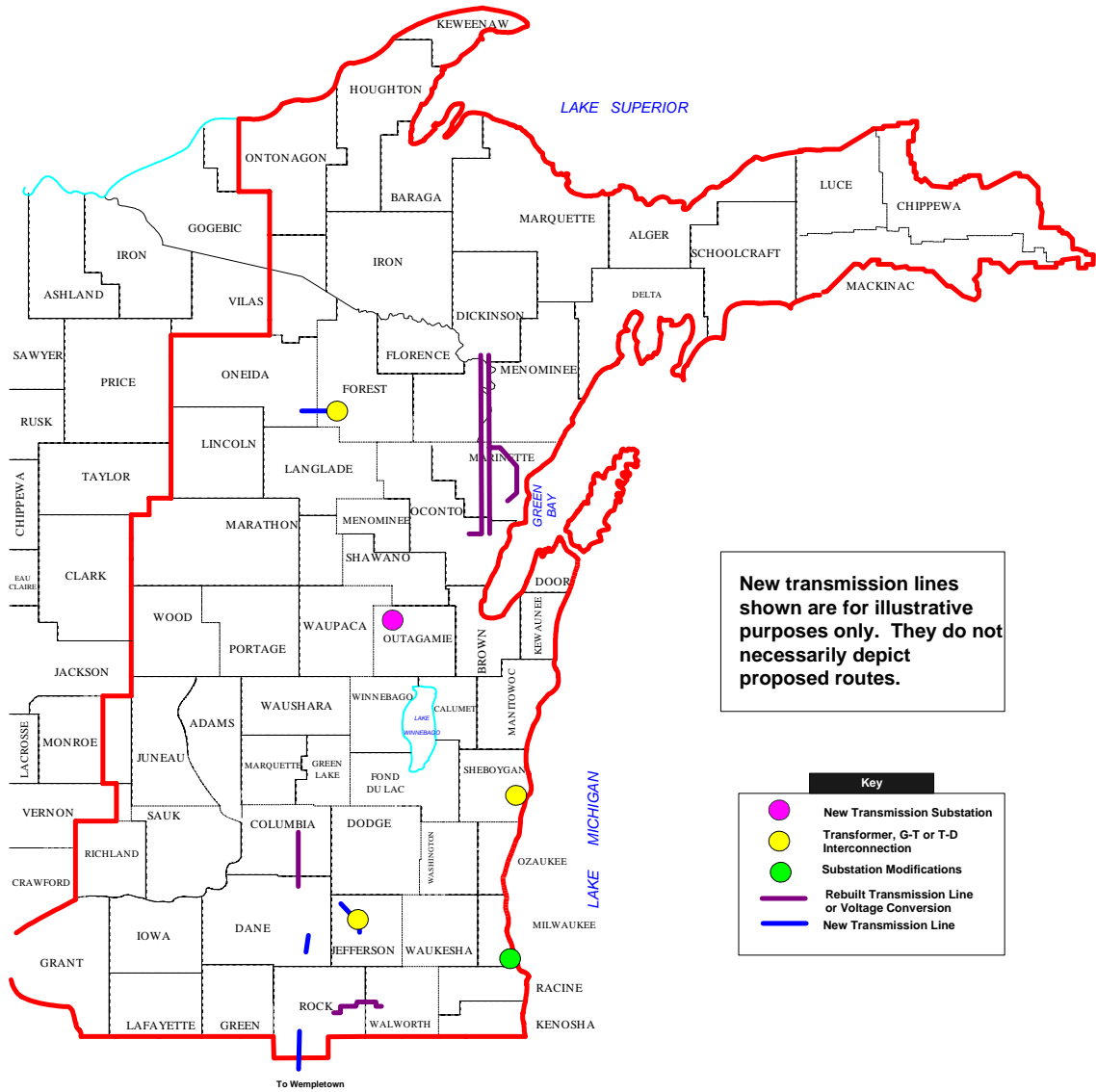
- ❑ Rebuild existing West Marinette-Menominee 69 kV line to double circuit 138/69 kV
- ❑ Convert Menominee-Rosebush 69 kV line to 138 kV
- ❑ Rebuild/reconductor Rosebush-Amberg 138 kV line
- ❑ Uprate Stiles-Plains double circuit 138 kV line
- ❑ Construct new line from West Darien to Southwest Delavan to Delavan at 138 kV, operate at 69 kV
- ❑ Construct 138 kV bus at Kegonsa and terminate both Christiana-Fitchburg circuits into Kegonsa

Project Applications to be filed in 2004

**Table III-2  
Project Applications to be filed in 2004**

<i>CPCN Applications</i>
Columbia-North Madison 138 kV line conversion to 345 kV
Wempletown-Paddock 345 kV line
Femrite-Sprecher 138 kV line
Jefferson-Lake Mills-Stony Brook 138 kV line
Venus-Metonga 115 kV line
Elm Road generating station 138 kV line relocations and substation improvements
Sheboygan Energy Center Interconnection
Southwest Delavan-Delavan-Bristol 138 kV line
<i>CA Applications</i>
Plains-Stiles 138 kV line rebuild, Amberg-White Rapids 138 kV line rebuild and White Rapids-West Marinette 69 kV line rebuild and conversion to 138 kV
Morgan-Falls-Pioneer-Stiles 138 kV line rebuild
Werner West 345/138 kV substation
Turtle-West Darien 69 kV line rebuild to 138 kV standards

**Figure III-2  
CA OR CPCN PROJECTS  
TO BE FILED by ATC IN 2004**



### Status of ATC Projects

In ATC's Assessments and Updates, projects are identified that address reliability issues, transmission service issues, generation interconnections or some distribution interconnections, or a combination of two or more of the above. In general, these projects address system performance issues per governing system planning criteria. ATC has numerous other projects underway or under evaluation that address other issues, including obsolete substation equipment, line facilities in poor condition, line relocations and most distribution interconnections. The projects referenced below include only those projects that address system performance issues.

To facilitate an understanding of the status of the various future projects, ATC developed project status designations for its 2003 10-Year Assessment: *Planned*, *Proposed* and *Provisional* (formerly *conceptual*).

#### *Planned* projects:

- ❑ planning is complete
- ❑ regulatory approvals, if required, have been applied for and are pending or have been issued
- ❑ may be under construction or in construction planning phase
- ❑ typically included in power flow models used to analyze transmission service requests

#### *Proposed* projects:

- ❑ planning is not complete
- ❑ regulatory approvals have not yet been sought
- ❑ represents ATC's preliminary preferred project alternatives from a system performance perspective
- ❑ typically not included in power flow models used to analyze transmission service requests

#### *Provisional* projects:

- ❑ planning is not complete
- ❑ regulatory approvals have not been sought
- ❑ does not necessarily represent ATC's preliminary preferred project alternative but reflects a placeholder project designation
- ❑ not included in power flow models used to analyze transmission service requests

In its 2001-2003 10-Year Assessments and Updates, ATC identified or assumed responsibility for approximately 350 projects that address system performance issues. Figure III-3 below illustrates the status of all Planned and Proposed projects. Regarding Figure III-3, it is worthwhile to note that:

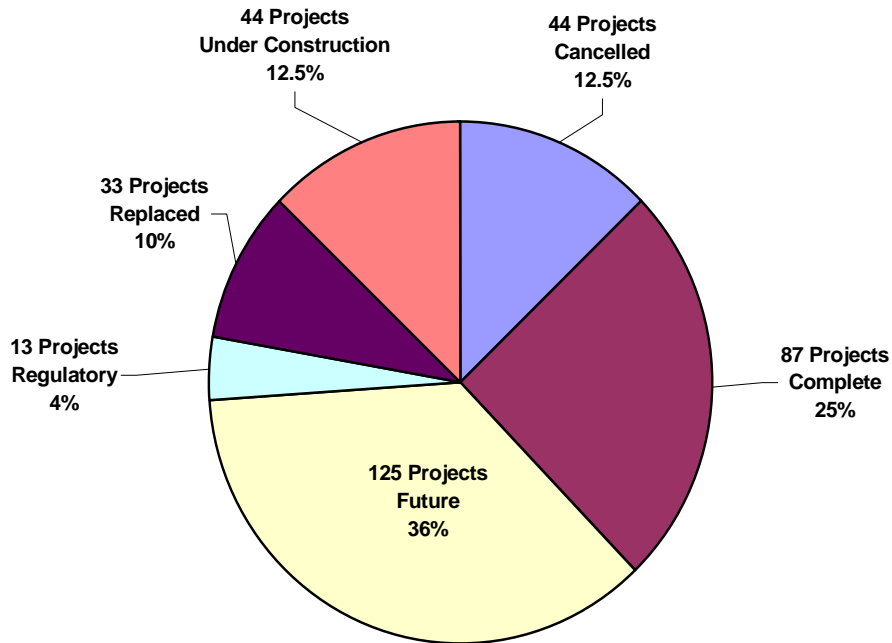
- ❑ ATC has completed 87 projects and another 44 are under construction. Notable projects most recently completed are listed earlier in this section. Projects under

construction range from capacitor bank installations to the Arrowhead-Weston transmission line project.

- ❑ Over 30 projects have been replaced with alternate project solutions. It is not unusual that the status of certain projects will change or evolve since customer needs and uses of the transmission system are continually changing.
- ❑ ATC canceled 44 projects that were identified in previous Assessment reports. Due to changing needs and up-to-date information, these projects were determined not to be needed. Most of these projects were relatively minor projects, involving only replacement of equipment at existing substations.
- ❑ ATC revised the scope of over 30 projects that were identified in previous Assessment reports. This is typically due to changing needs and system conditions.
- ❑ Approximately 125 future projects are in various stages of evaluation or development (Planned or Proposed).

**Figure III-3**

*American Transmission Company - Number of Projects by Status  
10-Year Assessments 2001-2003 Update  
Planned and Proposed Projects*



Project Costs

The estimated capital costs for all of the projects reflected in Figure III-3 are shown in Figure III-4. This figure shows that the combined capital costs for projects that are completed, canceled, replaced, in licensing and under construction account for roughly 56% of the estimated total capital costs, with future projects accounting for the remaining 44%. The estimated capital costs depicted in Figure III-4 are based only on those projects listed in the previous Assessments that affect system performance. The total estimated capital cost of those projects as reported in the 2003 10-Year Assessment was approximately \$1.7 billion. Other anticipated projects, including substation equipment replacements, pole and conductor replacements, most T-D interconnections, road relocations and generation interconnections not included in the 2003 10-Year Assessment, make up the remaining \$1.1 billion of the \$2.8 billion in capital expenditures that ATC projects over the next ten years. The cost estimates included in the below figure do not include estimates for Provisional projects from the 2003 10-Year Assessment and Update.

**Figure III-4**

*American Transmission Company - Cost of Projects by Status  
10-Year Assessments 2001-2003 Update  
Planned and Proposed Projects*

