

## INDEX

- Acid deposition 15, 69, 71, 74, 78, 84, 86, 112, 188, 243
- Action alternatives S-9, S-11-13, 164, 185
- Air pollution 88, 99-100, 234, 238
- Air quality S-14-16, 8, 15, 29, 57, 62, 69-70, 72, 78-80, 88, 149, 171-172, 178, 188, 234, 245-246
- Aquifer 96-98
- Ash S-15, S-17, S-7, 11, 112-113, 116, 128-129, 140, 143-144, 150, 169, 172, 174-175, 177, 179, 204-205, 207, 243
- Base load 23-24, 225
- Baseline S-4-5, S-7-10, 1, 3-5, 7, 9-10, 18, 21-22, 25-27, 29-32, 34, 36, 157, 163-165
- Bellefonte Nuclear Plant S-8, S-11, S-14, 4, 44-45, 117, 146, 158-160, 166, 176, 180, 207, 225-226, 243
- Biomass S-8, S-17, 10, 47-48, 54, 117, 130, 135-138, 141-144, 147, 149-151, 173, 176, 180-181, 183-185, 188, 204, 207, 209, 217, 221-222, 224, 227, 229, 244-245
- Browns Ferry Nuclear Plant 3, 4, 44-45, 63-64, 106-107, 130, 146, 243
- Capacity S-1-2, S-4-5, S-8-16, 1, 3-5, 11, 19-20, 23-27, 29, 33, 35, 39, 40-42, 44-49, 53, 54, 72, 74, 84, 93-94, 107, 130-131, 134-135, 138, 142-143, 145-151, 154, 156-161, 163, 164-169, 171, 174, 176, 180-185, 197, 209, 211, 225-226, 231, 235, 243-244, 246
- Carbon dioxide S-6, S-9, S-14, S-16, 8, 28-30, 36, 67-69, 93-97, 141, 143-146, 149, 162, 163, 169, 172, 175, 177-179, 181-185, 189, 193-195, 223-224, 243
- Carbon monoxide 15, 70-71, 80-81, 144, 243
- Carbon sequestration and storage 7, 34, 93, 143-144, 158-160, 176, 178-179, 243
- Class I area 88, 90
- Clean Air Act S-16, 15, 81, 86, 88, 188, 218
- Clean Water Act 15, 99, 101, 116
- Climate S-6, S-14, S-16, 8, 11, 20, 29, 57-63, 65, 112, 130, 188-189, 194, 196, 216-221, 223, 224, 226, 227, 232, 245, 247
- Climate change S-6, S-14, S-16, 8, 11, 29, 57-58, 60, 112, 188-189, 194, 196, 216-221, 226-227, 232, 245, 247
- Closed-cycle cooling 15, 17, 106-108, 144, 169, 172, 178-179, 197
- Coal S-1, S-4-5, S-7-10, S-14-17, 1, 3-5, 10, 11, 15, 23-24, 28-29, 32-34, 36, 41-45, 48, 67, 71, 74, 80, 83, 88, 91-94, 96, 98, 100-101, 105-106, 108, 113, 120, 127-129, 138, 140-144, 150-151, 157-160, 163-165, 168-169, 172-180, 183-184, 186, 188, 197-201, 204-205, 207, 209, 212, 220, 224, 228, 243-247
- Coal mining 16, 67, 91, 100, 178, 197, 200, 209
- Coal plant idling S-7, S-10-13, S-16-17, 34, 142-143, 158-160, 204
- Cofiring 1, 138, 141, 149, 150-151, 176, 180, 183-185, 207
- Cogeneration 47-48, 140, 156, 243
- Combined cycle 4, 8, 10-14, 16, 23, 36, 45-46, 48, 107, 141, 143-145, 157, 165-168, 174, 176, 178-180, 185, 243, 245
- Combined heat and power 47, 151, 156, 243

Integrated Resource Plan

Combustion turbine	8, 10-14, 16, 23, 45, 100-101, 144-145, 151, 154, 165-168, 174, 176, 179-180, 226, 243, 245-246
Compressed air energy storage	8, 154
Cultural resources	15, 118, 173, 234
Cumberland Fossil Plant	94, 101
Cumberland River	46-47, 99, 101, 108, 110, 120
Demand response	1, 2, 5, 10-11, 16, 28-29, 33, 39, 49-50, 52-53, 154, 156, 158-160, 171, 185, 231, 244
Demand-side	S-1-3, S-8, 5, 9-10, 14, 16, 19, 24-25, 35, 49, 139, 244-245
Diesel	1, 41, 47-48, 88, 145, 149, 174, 212
Distributed generation	29, 232
Ecoregion	110-111, 244
Emission allowance	6, 28-30
Emissions	8- 9, 14-16, 5, 8, 11, 28, 36, 42, 67-69, 71-76, 78, 80, 82-84, 86, 88, 93, 95, 135-136, 139, 143-146, 150, 162-163, 169, 172-185, 188-195, 200, 217, 219, 220, 221, 224, 227-228, 232, 247
Endangered and threatened species	S-15, S-17, 15, 114, 171-173, 187, 196, 233
Energy audit	155
Energy efficiency	1-2, 5-8, 10-11, 16, 20, 24, 28-30, 33, 39, 49,-52, 154, 155, 158-160, 171, 185, 221, 231, 244
Energy efficiency and demand response	S-2, S-5, S-7, S-9, S-12, S-14, S-16, 5, 10-11, 16, 24-26, 28, 33-34, 39-49, 50, 52, 154, 157-160, 163, 164, 167, 169, 171, 185, 188, 212, 231, 244
Energy evaluation	51
Environmental justice	15
Environmental Protection Agency	14, 218-219, 237, 244-246
Farmland Protection Policy Act	15, 118
Forests	69-70, 74-75, 78, 82, 84, 110-112, 115-118, 135-136, 141, 150, 173, 184, 187, 196, 216-217, 224, 228, 234, 237
Generation Partners	49, 53, 141, 148-149, 156, 186
Geology	90, 92-93, 171, 221
Gleason combustion turbine plant	10-14, 46, 165-168
Green Power Switch	47, 49, 54
Greenhouse gas	S-1, S-8, S-14, S-16, 10-11, 28-30, 67, 69, 139, 143, 169, 172, 175, 177-185, 188-189, 194, 217-219, 221-222, 224, 227-228, 232, 243-244
Groundwater	15, 91, 96-97, 99, 101, 103-105, 107-108, 178, 200, 215-216, 218, 221, 223, 229, 231, 233
Gypsum	113, 128-129, 143-144, 172, 204, 247
Hazardous air pollutant	16, 29-30, 69, 78, 81, 188, 245
Hazardous waste	126-127, 245
Heat pump	51, 142, 155
High-level waste	16-17, 129, 172, 175, 207
Hydro modernization	16, 46, 147, 176, 181, 188-189, 225

Hydroelectric	S-8, S-14, 10, 16, 23, 33, 41, 46-48, 54, 82, 127, 130, 134-135, 147, 154, 159-160, 174, 176, 181, 186, 217, 219, 225, 231, 246
Integrated resource planning	2, 5, 10, 13, 15-16, 57, 232-233, 245
John Sevier Fossil Plant	4, 42, 45, 106-107, 143, 145, 157, 179, 226, 245
Land requirements	S-17, 11, 142, 169, 173, 179, 181-184, 187-188, 207, 209-210
Land resources	15, 17, 169, 173, 212
Landfill gas	48, 54, 130, 141, 149, 174, 176, 183, 188-189, 207
Landfill methane	135-136
Lead	1, 15, 29, 32, 45, 70, 80-82, 218
Life-cycle impacts	17, 109, 169, 172, 173, 174, 175, 177, 178, 179, 180, 181, 182, 183, 184, 185, 209, 210, 217, 219, 220, 221, 222, 224
Lignite	48, 98, 143, 174
Limestone	91, 96, 98-99, 111, 114, 128, 144, 172, 174, 178, 244
Load forecast	4, 12, 19-20, 21, 25-26
Low-income populations	171, 211
Low-level waste	16, 129-130, 175, 177, 207
Mercury	S-16, 8, 69, 82-85, 102-103, 126, 144, 169, 172, 178-179, 184-185, 188, 192, 218, 227
Minority populations	15, 120, 126-127, 171, 211
Mississippi River	92, 97, 101, 108, 110, 120, 148
National Register of Historic Places	119-120, 246
Natural gas	S-1,-3, S-5-6, S-8-9, S-14, S-16-17, 5, 19-24, 28-29, 39, 41, 45-46, 48, 67-68, 93, 107, 110, 127, 141, 145, 154, 158, 163, 169, 171, 173-174, 176, 179-180, 188, 197-200, 203-204, 209, 212, 220, 224, 243
Need for power	1, 3, 4, 6, 19, 44, 155, 231
Nitrogen oxides	15-16, 42, 74-75, 77-78, 84, 86, 144-145, 150, 169, 172, 174, 176, 178-179, 184-185, 188, 191, 246-247
No Action Alternative	1, 9-10, 12, 164, 165
Non-attainment areas	15, 70-72, 75, 77, 80-81, 246
Nuclear	S-1, S-4-9, S-14-18, 1, 3, 4, 6, 8, 10-11, 16, 23-24, 25, 28, 32-34, 36, 41, 44-45, 63-64, 100-101, 105-107, 117, 127-130, 139-141, 144, 146, 151, 157-160, 163, 169, 172-176, 180, 188, 196-200, 202, 207, 209-210, 212, 219, 222, 224-226, 233, 243, 245, 246-247
Nuclear Regulatory Commission	44, 139, 146, 196, 219, 222, 246
Ohio River	14, 57, 110
Open-cycle cooling	15, 105-106, 108, 144, 172, 178, 196-197
Ozone	15, 70, 74, 75, 76, 77, 86, 112, 186, 188
Paradise Fossil Plant	14, 42, 57, 94, 105, 106, 110, 117, 178
Peak demand	7, 19, 23-25, 53, 151, 155, 186
Peak load	S-3-, S-14, 4, 19, 21-22, 25-26, 156, 246
Peaking power	23
Per capita income	121, 124-125

Photovoltaic	S-14, S-17, 1, 46, 133-135, 140, 149, 173, 176, 182, 207, 209, 212, 217, 219, 225, 246
Portfolio	S-2, S-4, S-7-13, 5, 7-8, 10, 14, 23, 25-26, 28, 33, 34-36, 49, 50, 52, 130, 134, 139, 154, 157-161, 163-167, 181, 232, 246
Power exchanges	16, 39-40
Power purchase agreement	4, 8, 9, 14, 1, 23, 25, 39, 45, 47, 48, 49, 69, 141, 142, 143, 147, 171, 174, 180, 246
Present value of revenue requirements	9, 35-36, 161, 163, 246
Prime farmland	118, 173, 187, 233
Pumped storage hydro plant	7, 14, 23, 33, 34, 46, 134, 154, 158-159, 176, 185
Raccoon Mountain Pumped Storage Plant	4, 23, 46, 134, 154, 174, 185
Red Hills Power Plant	108, 143, 178, 225
Regional haze	15, 71, 74, 86, 88, 188
Renewable energy (also see index entries for specific types of renewable energy)	S-1, S-5-S-9, S-12, S-14, 6, 10-11, 25, 28-29, 32, 34-35, 41, 48-49, 53-54, 63, 131, 134, 141, 147, 155, 157-160, 163-164, 167, 186, 188, 215, 217, 219, 221, 223-224, 229, 234, 246
Risk	S-1-2, S-9, 5, 7-8, 11, 15, 23, 28-29, 31, 36, 161-164, 204, 231, 233, 235
Scenarios	S-1, S-3-6, S-8-13, S-16-17, 6, 11-12, 16, 19, 21-22, 26-33, 35-37, 157-168, 178, 180, 186, 188-192, 194, 197-210, 223, 227, 232-233
Scoping	S-2, 5, 9, 10-12, 16, 33, 139-140, 226
Shawnee Fossil Plant	4, 42, 94, 106, 110, 117, 128, 140, 143, 151, 239
Short-term rates	9, 35, 36, 161
Socioeconomic environment	S-14, S-18, 13-14, 16, 57, 120, 210-211
Solar energy	132, 246
Storage	S-5, S-7-8, S-14-15, 1, 4, 23, 29, 33-34, 41, 45-46, 75, 93-97, 101, 113, 126, 129-130, 134, 140, 143-146, 150-151, 154, 157-160, 176, 185, 204, 207, 212, 217, 222-223, 243, 246
Strategies	S-1-3, S-5, S-7-14, S-16-18, 5-6, 11-12, 14, 16, 19, 23, 33-36, 57, 88, 130, 139, 140, 142, 147, 157, -169, 171-174, 176, 178, 182-186, 188-212, 226, 233
Sulfate	71, 84, 86-88, 98, 128, 144, 188, 247
Sulfur dioxide	15-16, 30, 42, 68, 70, -73, 78, 84, 86, 88, 144, 169, 172, 174-179, 184-185, 188, 190, 244, 247
Supply-side	1, 3, 8, 10-11, 16, 19, 35, 139, 172-174, 176, 245, 247
Surface mining	11, 44, 48, 143, 178, 200
Surface water	15, 16, 99-101, 104-105, 107-108, 233
Tailwater	100, 109, 114-115
Temperature	14, 16, 57-60, 99, 106, 117, 141, 194, 196-197, 220
Tennessee River	S-14, 1-2, 6, 8, 46-47, 57, 59-60, 99-101, 105, 108-110, 113, 119-120, 135, 196, 228, 229
Transmission system	S-2, S-5, S-8, S-15, 1, 3-5, 7, 10-11, 15-16, 21, 28-29, 33, 35, 39-40, 47, 54, 67, 69, 113, 115-117, 119-120, 126, 131, 135, 142, 157-160, 164, 171, 185-187, 218, 222, 225-226
Uranium	17, 28, 45, 129, 177-180, 200, 212, 245
Visibility	15, 69-70, 78, 88-89, 91, 218, 228

Volatile organic compounds	68, 75-76, 247
Water quality	S-15-16, 6, 8, 15, 98-102, 109, 115-116, 197, 231-233
Widows Creek Fossil Plant	42, 106, 143, 178
Wildlife	15, 17, 110, 112-117, 131, 172-173, 182, 196, 212, 215-217, 219, 226, 228, 232, 233, 237-238
Wind energy	49, 61, 131, 148, 182, 210, 215-217, 222
Windfarm	1, 46-47, 148, 181-182